

A Study on the Origin of Modern Sino-Korean

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Conventions

Modern Mandarin forms and Chinese historical phonology terms are given in *pinyin* Romanization. Korean words are given in the Revised Romanization of Korean, which is the official Korean language Romanization system in South Korea. However, the names of Hangul alphabets are given in the Yale Romanization of Korean because it uses a single consistent spelling for each alphabet irrespective of its context, not like the Revised Romanization of Korean, which proposes different transcriptions for the same alphabet depending on its phonetic context. Phonetic transcriptions are given in the International Phonetic Alphabet (IPA). Square brackets are used to refer to a certain feature, such as [+voiced], or with IPA notation to specify a phonetic value. The *fanqie* spelling of a Chinese character is placed in parentheses.

Abbreviations

<i>CJM</i>	<i>Cheon ja mun</i> 千字文
<i>DD</i>	<i>Donggyeong daehak</i> 東京大學 edition (of <i>Hunmong jahoe</i>)
<i>DG</i>	<i>Dongguk seorim</i> 東國書林 edition (of <i>Hunmong jahoe</i>)
<i>DGJU</i>	<i>Dongguk jeong'un</i> 東國正韻
<i>DH</i>	<i>Daehag eonhae</i> 大學諺解
<i>EMC</i>	Early Middle Chinese
<i>GJ</i>	<i>Gyujang jeon'un</i> 奎章全韻
<i>GJG</i>	<i>Gyujang gak</i> 奎章閣 edition (of <i>Hunmong jahoe</i>)
<i>GMH</i>	<i>Gwangmun hoe</i> 光文會 edition (of <i>Hunmong jahoe</i>)
<i>HD</i>	<i>Hwadong jeongeum tongseog ungo</i> 華東正音通釋韻考
<i>HG</i>	<i>Hyo'gyeong eonhae</i> 孝經諺解
<i>HLYY</i>	<i>Yiqie jing yinyi</i> 一切經音義 by Huilin 慧琳
<i>HMJE</i>	<i>Hunmin jeongeum</i> 訓民正音
<i>HMJH</i>	<i>Hunmong jahoe</i> 訓蒙字會
<i>HWZY</i>	<i>Hongwu zhengyun</i> 洪武正韻
<i>IG</i>	<i>I'gyeong eonhae</i> 易經諺解
<i>JGG</i>	<i>Jon'gyeong gak mungo</i> 尊經閣文庫 edition (of <i>Hunmong jahoe</i>)
<i>JSYY</i>	<i>Jinshu yinyi</i> 晉書音義
<i>JY</i>	<i>Jung'yong eonhae</i> 中庸諺解
<i>LMC</i>	Late Middle Chinese
<i>MC</i>	Middle Chinese
<i>MiSK</i>	Middle Sino-Korean
<i>MJ</i>	<i>Maeng'ja eonhae</i> 孟子諺解
<i>MoSK</i>	Modern Sino-Korean
<i>NE</i>	<i>Non'eo eonhae</i> 論語諺解

NG	<i>Naegak mungo</i> 內閣文庫 edition (of <i>Hunmong jahoe</i>)
OC	Old Chinese
OM	Old Mandarin
OP	<i>Jeon'un okpyeon</i> 全韻玉篇
QYZZT	<i>Qieyun zhizhang tu</i> 切韻指掌圖
SE	<i>Seo'gyeong eonhae</i> 書經諺解
SG	<i>Si'gyeong eonhae</i> 詩經諺解
SGSG	<i>Samguk sagi</i> 三國史記
SH	<i>Sohag eonhae</i> 小學諺解
SK	Sino-Korean
SSDZ	<i>Sisheng dengzi</i> 四聲等子
SSTH	<i>Saseong tonghae</i> 四聲通解
SU	<i>Sam'un seonghwi</i> 三韻聲彙
SYCHT	<i>Shengyin changhe tu</i> 聲音唱和圖
YYYY	<i>Yiqie jing yinyi</i> 一切經音義 by Xuanying 玄應
YH	<i>Sinjeung yuhap</i> 新增類合
YJ	<i>Yuk'jo beop'bo dan'gyeong eonhae</i> 六祖法寶壇經諺解
YS	<i>Yesan mungo</i> 叡山文庫 edition (of <i>Hunmong jahoe</i>)

A Timeline of China and Korea

China	Korea		
...	...		
Western Han 漢 (206 BC-8 AD)	Gojoseon 古朝鮮 (? -37 AD)		
	Han Commanderies (108 BC-313 AD)		
	Silla 新羅 (57 BC-668 AD)	Goguryeo 高句麗 (37 BC-668 AD)	Baekje 百濟 (18 BC-663AD)
Eastern Han 漢 (25-220)			
Three Kingdoms (220-265)			
Western Jin 晉 (265-317)			
Eastern Jin 晉 (317-420)			
Southern and Northern Dynasties (420-589)			
Sui 隋 (581-618)			
Tang 唐 (618-907)			
Unified Silla (668-935)			
Five Dynasties (907-960)			
Northern Song 宋 (960-1127)			
Southern Song 宋 (1127-1279)			
Yuan 元 (1271-1368)			
Ming 明 (1368-1644)	Joseon 朝鮮 (1392-1910)		
Qing 清 (1616-1911)			
...	...		

Abstract

This study aims to examine the origin of Modern Sino-Korean, namely the pronunciation system of Chinese characters in the present day Korean. As a system of loanwords, Sino-Korean (hereafter SK) inevitably includes unfaithful representation in the process of borrowing. In order to have a better understanding of the adaptation strategy in SK, we introduced the theory of loanword phonology and conducted a case study on the Mandarin loanwords in Modern Korean in Chapter 2. The result of this case study shows that both the perception and phonology of the borrowing language play a role in the process of adaptation. Furthermore, different borrowers may adopt different adaptation strategies in the process of borrowing, including different constraints and different rankings of the same constraints.

In Chapter 3, 4 and 5 we examined the initials, rhymes and tones in *Hunmong jahoe* 訓蒙字會 (1527), the earliest Hangul notated character dictionary in Korea. The SK system presented in this book provides the following valuable hints regarding the origin of Modern SK. (1) The labial-dental *fei* 非 initial group has not occurred. (2) The *yun* 云 initial is separated from the *xia* 匣 initial. (3) The *zhi* 知 initial group has not become affricative or fricative. (4) The *chan* 禪 initial and the *chuan* 船 initial belong to the same category. (5) The *ri* 日 initial has lost its nasality. (6) *Chongyun* 重韻 (double rhymes) are distinguished in the following pairs of rhymes: *hai* 哈 and *tai* 泰, *yu* 魚 and *yu* 虞, *zhen* 真 and *yin* 殷, *zhi* 質 and *qi* 迄, *dong* 東(div.3) and *zhong* 鍾, *wu* 屋 and *zhu* 燭. (7) Fourth division rhymes *qi* 齊, *xiao* 蕭, *tian* 添, *tie* 帖, *xian* 先, *xie* 屑, *qing* 青 and

xi 錫 have *-j* glide. (8) The distinction of Middle Chinese *-p*, *-t* and *-k* codas are preserved. In order to identify the time and place that Modern SK borrowed from Chinese, we compared these eight features with the phonological system in different works of Chinese, including *Qieyun* 切韻 (601), Xuanying's 玄應 (?-661) *Yiqie jing yinyi* 一切經音義 (c. 650) (abbr. *XYYY*), He Chao's 何超 *Jinshu yinyi* 晉書音義(747) (abbr. *JSYY*), Huilin's 慧琳 (737–820) *Yiqie jing yinyi* 一切經音義 (810) (abbr. *HLYY*), *Shengyin changhe tu* 聲音唱和圖 (c.1050), and *Qieyun zhizhang tu* 切韻指掌圖 (c. 12th century). The comparison shows that the mainstream SK is a reflection of Chinese later than *XYYY* (c. 650) but earlier than *HLYY* (810). Given the fact that the *fanqie* in *XYYY* and *HLYY* is based on the pronunciation of the Chang'an 長安 dialect, this study concludes that the matrix of Modern SK is borrowed from the Chang'an dialect between 650 AD and 810 AD.

Chapter 1 Introduction

1.1 The purpose of this study

The topic to be investigated in this dissertation is "the origin of Modern Sino-Korean". In broad sense the term "Sino-Korean" refers to both the phonological system and the vocabulary in Korean that have a Chinese origin. In this study this term is used in its narrow sense, which is the Korean reading of Chinese characters, i.e., the Sino-Korean phonology. The borrowing of Chinese characters by Koreans can be traced back to as early as 1st century BC, when the Han 漢 (206 BC-220 AD) Dynasty set up four commanderies in the northern part of the Korean peninsula. Along with the borrowing of Chinese characters, the Chinese pronunciations of characters must also have been transmitted into Korean, and this brought about the earliest form of Sino-Korean. Since the Sino-Korean in different historical periods may not be homogeneous, it is necessary to keep in mind the time of the first transmission and that of formation could be different. It should be noted that this study will only focus on the origin of the Sino-Korean in the Modern period.

Karlgren's work *Etude sur la phonologie chinoise* (1926) brought to light the importance of SK in the study of Chinese historical phonology. In this book Karlgren utilized SK as the one of the sources, in addition to Chinese dialects, for the reconstruction of MC phonological system. After Karlgren (1926), many scholars employed SK as important data to clarify some debating issues in Middle Chinese phonology, such as the *chongniu* 重鈕 "rime doublets" issue. SK also plays an important role in the study of Korean historical phonology. Before the Korean alphabet Hangul was

invented in 1443 AD, Chinese characters had been serving as the primary means of writing in Korea. Therefore, the understanding of SK enables us to better understand the Korean materials recorded in Chinese characters, such as *idu* 吏讀 "clerk readings", *hyangchal* 鄉札 "vernacular letters", which are the main data sources in the study of Korean historical phonology.

In spite of the importance of SK data in Chinese and Korean historical phonology research, so far our understanding on the nature of SK is rather limited. This is reflected in the various hypotheses proposed regarding the origin of Modern SK, such as Maspero (1920), Karlgren (1926), Arisaka (1936), Kōno (1968, 1979), Pak (1971), Lee (1994), Ito (2007), and Eom (2008), among others. So far no consensus has been achieved, and the origin of Modern SK is still an outstanding issue in the field of Chinese and Korean historical linguistic research. In this study I will reexamine the origin of Modern SK, and the result of this research is expected to provide an insight to both Chinese and Korean historical phonology. Before we move to the literature review, in the following section I will first briefly explain the periodization of Chinese, Korean and Sino-Korean.

1.2 The periodization of Chinese, Korean and Sino-Korean

1.2.1 The periodization of Chinese

There are different viewpoints on the periodization of Chinese. Some scholars proposed the periodization of Chinese according to grammatical changes. Since our focus is the phonological change in Chinese, we will discuss the periodization of Chinese proposed based on phonological criteria. Based on major phonological changes in

Chinese, Karlgren (1926[1940]:20-21)¹ divided the history of Chinese into the following periods.

(1)

Proto-Chinese	The period preceding the earliest literary documents
Archaic Chinese	The language of the <i>Shijing</i> 詩經 (Book of Odes) (c. 1000 BC)
Ancient Chinese	The language of the rhyme dictionary <i>Qieyun</i> 切韻 (601 AD)
Middle Chinese	The language of the Song 宋 (960-1279) Dynasty rhyme tables
Old Mandarin	The language of the <i>Hongwu zhengyun</i> 洪武正韻 (1375 AD)
Modern Chinese	Present-day Mandarin

According to Norman (1988:23), later scholars generally replaced the terms "Archaic Chinese" and "Ancient Chinese" with "Old Chinese" and "Middle Chinese." Thus, in this study I will adopt the terms "Old Chinese" and "Middle Chinese." In order to differentiate the inner difference in Middle Chinese, Pulleyblank (1984) and Baxter (1992) divided Middle Chinese into two periods, namely Early Middle Chinese (hereafter EMC) and Late Middle Chinese (hereafter LMC). They believed that the sound system reflected in *Qieyun* is different from that in the new standard language, which is reflected in the sound glosses in Yan Shigu's 顏師古 commentary to the *Hanshu* 漢書, the Buddhist transcription practice in Huilin's 慧琳 *Yiqie jing yinyi*, poetic rhyming by unconventional poets. According to Pulleyblank (1984:3, 60-63), EMC corresponds to the literary language in the 6th century, as reflected in *Qieyun* (601), and LMC corresponds to the

¹ The book *Etude sur la phonologie chinoise* was published in 1926. The version that I am referring to is the Chinese version of this book, which was translated by Chao Yuanren et al. in 1940.

Chang'an 長安 dialect in the 7th-8th century, as reflected in the Song Dynasty rhyme tables, such as *Yunjing* 韻鏡 [Mirror of rhymes], *Qiyinlue* 七音略 [Summary of the seven sounds], etc. In order to observe the inner difference in Middle Chinese, this study will follow Pulleyblank and refer to the period of Ancient Chinese in Karlgren's periodization as Early Middle Chinese, and the period of Middle Chinese in Karlgren's periodization as Late Middle Chinese. The revised periodization of Chinese is listed below.

(2)

Proto-Chinese	The period preceding the earliest literary documents
Old Chinese	The language of the <i>Shijing</i> (Book of Odes) (c. 1000 BC)
EMC	The language of the rhyme dictionary <i>Qieyun</i> (601AD)
LMC	The language of the Song (960-1279) Dynasty rhyme tables
Old Mandarin	The language of the <i>Hongwu zhengyun</i> (1375 AD)
Modern Chinese	Present-day Mandarin

1.2.2 The periodization of Korean

Korean is generally believed to be a language of the Ural-Altaic family although there are still many debates (eg. Aalto 1955, Miller 1971, Lee 1972, Unger 1990, Starostin 1991). Below is a widely accepted periodization of Korean, which is proposed by Lee (1972).

(3)

Old Korean	Korean up to the end of Unified Silla (935)
Early Middle Korean	The language of Goryeo 高麗 Dynasty (918-1259)

Late Middle Korean	From the beginning of the Joseon 朝鮮 Dynasty (1392) to the end of the 16 th century
Recent Korean	From the beginning of the 17 th century to the end of the 19 th century
Modern Korean	From the beginning of the 20 th century to the present day

The Old Korean period lasts a long time in Lee's proposal because there is no clear evidence to further divide this period due to limited data availability. The primary materials that reflect the EMK phonology are *Jilin leishi* 雞林類事 [A miscellaneous collection of things in Korea] and *Hyangyak gugeup bang* 鄉藥救急方 [Prescriptions for emergency treatment]. The book *Jilin leishi*, which contains a transcription of about 350 words in Goryeo language, is one of the most important materials that describe the 12th century Korean language. The author of this book is Song Mu 孫穆, who was sent from the Northern Song Dynasty to Goryeo (918–1392) as an emissary in 1103. *Hyangyak gugeupbang*, compiled in 1236, is the oldest extant medical book in Korea. This book contains the native Korean pronunciation of medicinal plants transcribed with Chinese characters. Since these two books use Chinese characters to transliterate Korean vocabulary, the interpretations of these data poses many challenges to historical linguists. Thanks to the development of Hangeul, a phonetic symbol writing system which was invented in 1443 and officially promulgated in 1446, one can get a detailed idea of the phonology in Late Middle Korean. Therefore, in this paper our discussion on ancient Korean is mainly based on the phonemic system of Late Middle Korean. A detailed discussion on this will be provided later in this chapter.

1.2.3 The periodization of Sino-Korean

One of the most widely accepted proposals on the periodization of SK is Yu (1980), which is shown as below.

(4)

Old Sino-Korean	From the borrowing of Chinese Characters to Silla's unification in 668 AD
Middle Sino-Korean	From 668 to the Imjin 壬辰 war ² in 1592
Modern Sino-Korean	From 1592 to the present

The unification of Korea in 668 implies the emergence of a linguistic standard in the Korean peninsula. Consequently, Sino-Silla became the norm for the pronunciation of Chinese characters among educated speakers in the country. The Imjin war caused a huge damage to the Korean society and also affected the norm of Sino-Korean. For example, the triangle symbol used to write the *ri* 日 initial and the diacritic dots used to mark tones disappeared after the Imjin war. In this study we will adopt this periodization with only a little adjustment as to the term "Modern Sino-Korean" and "Middle Sino-Korean." The SK in Modern period is by no means the same as the SK in 1592 due to the occurrence of sound change. For example, [t] and [t^h] became palatalized [tɕ] and [tɕ^h] when followed by a [i] medial or nucleus in the 17-18th century. The diphthongs [ai] and [ɔi] became monophthongs [æ] and [e] in the 18-19th century. In this study the term "Modern Sino-Korean" will be used solely when referring to the SK in the present day. The *Hangul*

² This is a war between Korea and Japan in the year of 1592, which is an *imjin* 壬辰 year in the sexagenary cycle.

matchumbeop tongiran 한글 맞춤법 통일안 [A proposition for the unification of Hangul orthography], issued by the Korean Language Society in 1933, is considered as a watershed between Modern SK and Middle SK in this study. The period from 1592 to 1933 and that from 668 to 1592 will be regarded as Late Middle Sino-Korean and Early Middle Sino-Korean respectively. To sum up, our periodization can be expressed as follows:

(5)

Old Sino-Korean	From the first borrowing of Chinese Characters to Silla's unification in 668 AD
Early Middle Sino-Korean	From 668 to the Imjin war in 1592
Late Middle Sino-Korean	From 1592-1933
Modern Sino-Korean	From 1933 to the present

1.3 The history of Sino-Korean

Although the exact time of the transmission of Chinese characters to Korea is still under debate, given the geographical closeness to China, the cultural exchange between China and Korea can be easily speculated. In 108 BC the Han 漢 Dynasty set up four commanderies, including Lelang 樂浪, Lintun 臨屯, Xuantu 玄菟 and Zhenfan 真番, in the northern part of the Korean peninsula. This event marks a close political and cultural communication between China and Korea at that time, implying that the transmission of Chinese characters to Korea should be no later than 2nd century BC.

Since 1st century BC, the Korean peninsula saw the beginning of the period of the Three Kingdoms, i.e., Goguryeo 高句麗 (37 BC-668 AD), Baekje 百濟 (18 BC-663 AD),

and Silla 新羅 (57 BC-668 AD). Goguryeo is located in the northern part of the Korean peninsula and it borders northern China. According to *Samguk sagi* (hereafter *SGSG*) 三國史記 [Historical records of the Three Kingdoms], the oldest extant Korean history book, Goguryeo started to use characters since the establishment of the kingdom.³ According to volume 18 in *SGSG*, in 372 AD the king Fu Jian 苻堅 (337-385) of Former Qin 前秦 (350-394) sent a figure of Buddha and Buddhist sutras to Goguryeo,⁴ suggesting the transmission of Buddhism into Goguryeo from Northern China. Since Goguryeo mainly communicated with Northern China by land route, it is believed that Goguryeo adopted northern Chinese pronunciations.

Baekje is located in the southern part of the Korean peninsula. According to *SGSG*, during the period of king Geunchogo 近肖古 (346-375 AD), the savant of the Grand Academy named Ko Seong 高興 compiled the history book *Seoki* 書記 to record the history of Baekje.⁵ Baekje's communication with China is mainly by sea. According to *SGSG*, Baekje's first tribute to China was made to the Eastern Jin Dynasty in 372 AD.⁶ From then on Baekje sent about 14 tribute missions to the southern states of China (Eom 1991:18).

³ "The use of characters started since the beginning of the kingdom, and there was one who recorded affairs in one hundred volumes, which was named *Yuki* [Extant records]. 國初始用文字, 時有人記事一百卷, 名曰留記。"

⁴ "In the second year of king Sosurim, in the sixth month in summer, the king Fu Jian dispatched envoy and monk Shun Dao to send a figure of Buddha and Buddhist sutras (to Koguryo). 二年夏六月, 秦王苻堅遣使及浮屠順道送佛像經文。"

⁵ "There was no written history record in Baekje since the beginning of the kingdom. By this time the savant of the Grand Academy Ko Seong compiled the history book *Seoki* [written record]. 百濟開國已來, 未有以文字記事, 至是得博士高興, 始有書記。"

⁶ "In the 27th year of king Geunchogo, in the first month in spring, (Baekje) sent envoy to present tribute to the Jin Dynasty. 二十七年春正月, 遣使入晉朝貢。"

Silla is located at the southeastern end of the Korean peninsula. Since Goguryeo and Baekje separate it from China, the communication between Silla and China is later than the other two kingdoms. However, after the 6th century Silla defeated Baekje and controlled the lower Han River area, and then started to communicate with Southern China by sea. According to *Liangshu* 梁書 [History of Liang], Silla sent tributes to Liang 梁 (502-557) Dynasty in Southern China starting in 521.⁷ After the establishment of Tang 唐 (618-907) Dynasty, Silla was greatly influenced by Tang through political and cultural contacts. According to the records in *Jiu Tang shu* 舊唐書 [The old history of the Tang], Silla sent tribute missions to Tang since the fourth year of the Wude 武德 reign (621).⁸ In terms of cultural communication, Silla started to send students to Tang China to study Chinese classics in 640 AD.⁹ *Tongsa kangmok* 東史綱目 [The outline of Korean history] states that hundreds of students from Silla studied abroad in Chang'an, the capital of Tang, in the 7th and 8th centuries.¹⁰ In 757 King Kyongduk 景德 (742-765 AD) of Unified Silla ordered to change the native Korean place names into Chinese style names. This implies that a systematic and uniform reading of Chinese characters in SK had established at that time. Although Unified Silla was overturned in 918 AD, the SK

⁷ "In the second year of Putong reign, the King, whose family name is Mo and given name Jin, started to send people along with Baekje's envoy to present tribute. 普通二年，王姓慕容名秦，始使人隨百濟獻方物。"

⁸ "In the fourth year of the Wude reign in Tang, Silla sent envoy to present tribute. Since then Silla never stopped to present tribute to Tang. 唐武德四年，新羅遣使朝貢...自此朝貢不絕。"

⁹ "In the ninth year of King Seondeok, in the fifth month in summer, the king sent juniors to Tang, requesting to allow them attending the imperial college. 九年夏五月，王遣子弟于唐，請入國學。"

¹⁰ "After Silla served Tang, Silla always sent princes to join Tang's imperial guard troops and sent students to study in Tang's imperial college. When these students returned Silla after the ten year limit, Silla sent other students to Tang and the number of students was as many as more than one hundred. 新羅自事唐以後，常遣王子宿衛，又遣學生入太學習業，十年限滿還國，又遣他學生入學者，多至百餘人。"

system in Unified Silla was generally adopted by later Goryeo and Joseon dynasties and lasted until Modern Korean.

1.4 Literature review

A considerable amount of literature has been published on the origin of Modern SK. Most of the previous studies can be classified into the following five categories.

1.4.1 Wu dialect origin hypothesis

1.4.1.1 Maspero (1920)

Maspero (1920) examined the historical communication between Korea with China from the Three Kingdoms period until Joseon Dynasty. Based on these historical details, Maspero (1920) claimed that Goguryeo, which has close relationship with northern China, borrowed the Chinese pronunciation from northern Chinese, while Silla, which has close relationship with southern China, borrowed the Chinese pronunciation from Wu 吳 dialect around the fifth century. Because Silla unified the Korean peninsula, Sino-Silla won over Sino-Goguryeo and finally became the mainstream of SK in the Joseon Dynasty. Maspero (1920) concluded that Modern SK is generally based on the Wu dialect from the 5th century although it also received some influence from Northern Chinese. Maspero's study was rejected by Karlgren (1922:4-6), who pointed out that Maspero's hypothesis is just based on historical probability. Maspero's hypothesis is reviewed in detail in Kōno (1979). Kōno (1979:309) comments that Maspero's hypothesis is "filled with imagination." In addition, Kōno (1979:311) states that "the study of Maspero has a merit in its historical point of view, which is not seen in other studies."

1.4.2 *Qieyun* origin hypothesis

1.4.2.1 Karlgren (1922, 1926)

Karlgren was the first western linguist who recognized the importance of Sino-Korean in the reconstruction of Middle Chinese. After a close comparison of Sino-Korean and Sino-Japanese as well as many Chinese dialects, Karlgren (1922:6, 1926:76) rejected Maspero's claim and concluded that Sino-Korean is essentially based on the Northern Chinese of the Sui 隋 and early Tang 唐 Dynasty, which was codified in the dictionary of *Qieyun* (601).

1.4.2.2 Pak Peong-cae (1971)

Pak (1971) includes a comprehensive analysis on the initials, rhymes and tones of Middle SK. Pak (1971) proposed that the foundational stratum of SK is the northern Chinese of Sui and early Tang, as reflected in *Qieyun*, although some elements of the Wu dialect of the Southern Dynasties (420-589) can also be traced at the earliest layer of Sino-Korean.

1.4.2.3 Zhang Weijia (2008)

Zhang (2008) proposed that SK contains three layers, which are "ancient layer, middle ancient layer and near ancient layer." The foundational layer of SK is a reflection of Middle Chinese, especially Early Middle Chinese. According to Zhang (2008), the [k] reading of the *xia* 匣 initial is a reflection of Old Chinese, and the palatalized reading of the *zhi* 知 initial (3rd division) and the *duan* 端 initial (4th division) is the trace of the near

ancient layer. In addition, Zhang (2008) attributes some features in SK, such as the distinction of *yu* 魚 and *yu* 虞, to the influence of the Wu dialect in the Southern Dynasties (420-589).

1.4.3 Song Dynasty (Kaifeng dialect) origin hypothesis

1.4.3.1 Arisaka (1936)

Arisaka (1936) claimed that the origin of Sino-Korean is the tenth century Kaifeng 開封 dialect of the Song Dynasty. According to Arisaka (1936), the following three prominent phonological features in SK indicate a close relationship between SK and the Chinese in the Song Dynasty. First, in the *zhi* 止 rhyme group the vowel is represented as [ʌ] after sibilant initials. Second, Middle SK reflects *yu* 魚 rhyme as [o] when the initial is from the *zhuang* 莊 initial group. Third, the *-t* coda in MC is represented as *-l*. Arisaka (1936) put forward that the coda *-p*, *-l* and *-k* in SK is a reflex of the Chinese coda system when the *-p*, *-t* and *-k* has weakened into *-b*, *-r* and *-g*. Arisaka's hypothesis was rejected by Kōno (1968, 1979) and Pak (1971). Kōno (1968, 1979) points out that the fact that some features in SK being consistent with a certain period of Chinese does not necessarily means SK was borrowed from Chinese at that time. Pak (1971:282) criticized that "Arisaka's theory seems to have been drawn from a prejudiced deduction being based on limited facts concerning Sino-Korean, thereby losing a comprehensive view point."

1.4.4 Tang Dynasty (Chang'an dialect) origin hypothesis

1.4.4.1 Kōno (1968[1979])

Kōno's study on SK can be found in four versions, including dissertation (1961), serialized journal articles (1964-1967), monograph (1968), and the version in the *Collected papers of Kōno Rokuro* (1979). The introduction to Kōno's study given here is based on Kōno (1979). Kōno (1979) claimed that in total four layers, roughly corresponding to the Wu dialect in the Southern dynasties, the Chang'an dialect in the Tang Dynasty, the Kaifeng dialect in the Song Dynasty and the Beijing dialect in the Ming 明 (1368-1644) Dynasty, can be found in SK. The main stratum of SK is based on the sound system in Chang'an in the Tang Dynasty, as reflected in the *fanqie* 反切¹¹ in Huilin's 慧琳 (737-820) *Yiqie jing yinyi* (810).

1.4.4.2 Lee Hae-woo (1994)

Lee Haewoo (1994) provides an etymophonological comparison of Chinese dialects, Sino-Japanese and Sino-Korean. The degree of etymophonological affinity among these three language families is examined in detail in Lee (1994). As for the origin of SK, Lee (1994) concluded that "Sino-Korean originates from the Chang'an language of the northern Late Middle Chinese in the 7-8th century rather than the language of the *Qieyun* in the 6th century."

1.4.4.3 Lee Yun-dong (1997)

Lee (1997) conducts a close examination of the irregular readings in SK, proposing explanations for the irregular readings from different aspects, including analogy of

¹¹ The principle of *fanqie* is to notate the pronunciation of one character with two characters, with the first one indicating the initial, while the second the rhyme. For example, the *fanqie* spelling for *dong* 東 is *dehong* 德紅. This shows that *dong* 東 has the same initial as *de* 德, and the same rhyme as *hong* 紅.

phonetic radicals, the influence of Old Chinese or Old Mandarin, the multiple *fanqie* notations, the influence of Chinese dialects or copy errors, etc. Lee (1997) concludes that the basis of SK is the Chang'an dialect in the Tang Dynasty.

1.4.4.4 Synn Asa (2006)

Synn (2006) compared different stages of Sino-Korean, including Middle SK and Modern SK, with the sound system in different periods of Chinese, from Old Chinese to Modern Mandarin. Synn (2006) proposed that the starting point of SK is based on the Chinese from the third century to the Six dynasties in the sixth century, and the main stratum of SK is a reflection of the northern Chinese dialect in the 8-9th century, while the latest stratum is based on the Chinese from the Northern Song Dynasty to the Yuan 元 (1271-1368) Dynasty.

1.4.4.5 Ito, Chiyuki (2007)

Ito (2007) conducted a comprehensive research on the SK readings in 26 historical texts, which were published between the late 15th century and the late 16th century. Rejecting the Old Chinese origin hypothesis and the *Qieyun* origin hypothesis, Ito (2007) claimed that it is highly possible that the origin of SK was the Chang'an dialect in late Tang Dynasty, arguing that the reading of Chinese characters was probably transmitted into Korean by these Korean monks who went to China during late Tang period.

1.4.4.6 Eom, Ik-sang (2008)

Eom (2008) examines the traces of Old Chinese, Middle Chinese, Old Mandarin and Modern Mandarin in the Modern Sino-Korean phonology system. According to Eom (2008), some readings in Modern SK, such as [ta] 茶 "tea" and [kum] 金 "gold", are OC traces. Some seemingly native Korean words, such as [nʌ] 너 "you" and [na] 나 "I", are also loanwords from OC. The matrix of SK, according to Eom (2008:185), is the northern Chinese dialect in the 6-8th century.

1.4.5 Old Chinese origin hypothesis

1.4.5.1 Nie Hongyin (1984)

Nie (1984) argued that SK presents a faithful representation of the initial and rhyme system in *Qieyun*, but the SK readings of many characters, which cannot be explained from the perspective of *Qieyun*, are explainable from the perspective of Old Chinese. According to Nie (1984:66), "the phonological system of SK is more close to Old Chinese than *Qieyun*. This is true as far as the issue of *chongniu* is concerned."

1.4.5.2 Lee Dukchun (1985, 1994)

Lee (1985, 1994) proposed that many features in SK are a reflection of Old Chinese. According to Lee (1985), the following features in Middle SK, such as representing the fourth division *yu* 喻 initial as alveolar, no distinction between alveolar stop and palatal stop, arise from the influence of Old Chinese.

1.4.5.3 Kang Sinhang (2003, 2010)

Kang (2003, 2010) also traces the origin of SK to the stage of Old Chinese. Kang (2010) proposed that the origin of SK is the Chinese which has no distinction of alveolar stops (*shetou* 舌头) and retroflex stops (*sheshang* 舌上), bilabial (*zhongchun* 重唇) and labial-dental (*qingchun* 輕唇), alveolar affricate/fricative (*chitou* 齒頭) and retroflex affricate/fricative (*zhengchi* 正齒). Kang (2010:98) states that "the establishment of SK system was deeply influenced by the Chinese in the Weijin Nanbeichao 魏晉南北朝 period (220-589 AD), when Buddhist classics were transmitted to the Korean peninsula."

1.4.6 Summary of previous studies

Based on the literature review above, the hypotheses on the origin of of Modern SK can be summarized as below.

(6)

Proposal	The origin of Modern SK	
	Time	Source Language
Kang (2003, 2010)	Weijin Nanbeichao period (220 to 589)	Old Chinese
Maspero (1920)	5 th century	Wu dialect
Karlgren (1926)	600 AD	Northern Chinese (reflected in <i>Qieyun</i>)
Pak (1971)	Sui and Tang dynasties (6-7 th century)	Northern Chinese (reflected in <i>Qieyun</i>)
Zhang (2008)	Early Middle Chinese	Chinese reflected in <i>Qieyun</i>
Kōno (1968[1979])	Tang Dynasty (8-9 th century)	Chang'an dialect (reflected in <i>HLYY</i>)
Lee Yundong (1997)	Tang Dynasty	Chang'an dialect
Eom (2008)	6-8 th century	Northern Chinese

Lee Haewoo (1994)	7-8 th century	Chang'an dialect
Synn (2005)	8-9 th century	Northern Chinese
Ito (2007)	late Tang Dynasty	Chang'an dialect
Arisaka (1936)	Song Dynasty (10 th century)	Kaifeng dialect

1.5 A reflection on previous studies

Previous studies have proposed different hypotheses on the layer/origin of SK from different approaches, and the origin of Modern SK is still a controversial and much disputed subject. The controversy can be explained by the following three disputed points.

First, some of previous studies have tended to overlook the fact that SK is a loanword system. For example, according to Karlgren (1954) the SK reading is one of the so-called "foreign dialects," which are parallel branches with native Chinese dialects, such as Cantonese or Taiwanese. The SK data was employed as direct evidence in Karlgren's comparative study on Middle Chinese phonology. However, the nature of SK is much different from Chinese dialects because SK inevitably includes unfaithful representation in the process of borrowing due to the difference in the phonological system between Chinese and Korean. Some previous studies, such as Kōno (1979), have noticed the existence of unfaithful representation in SK. Kōno (1979: 341) states that the mismatch between the *Qieyun* system and SK could be explained by the phonological structure of Korean. However, the principle of the loanword adaptation in SK is not discussed in Kōno (1979). Kōno (1979) proposes that SK is borrowed from the Chinese reflected in Huilin's *Yiqie jing yinyi*, arguing that the merging of rhymes in Huilin's *fanqie* is consistent with the rhyme system in SK. However, recent researches on loanword show that the mismatch in the inventory of two languages' initials may cause two different

initials to be represented as the same one in the target language. Recent studies on loanword phonology have presented a complicated picture on the principle of loanword adaptation. For example, the inputs that do not exist in the target language will be replaced as the most similar element, but which level of similarity, the similarity of the perception level or the phonemic level, is used to match the sounds is an outstanding question in loanword phonology. This issue, however, has not been discussed in previous studies, and thus need to be investigated in the future study.

Second, it is noteworthy that literature often offers different explanations as to the same feature in SK. For example, the [k] reading of the *xia* 匣 initial in SK is considered as a reflection of OC in Zhang (2008), but a result of analogy to the sound of the phonetic component or characters with the same phonetic radical in Pak (1971) and Kōno (1979). The [o] for *yu* 魚 rhyme is believed to be a borrowing from OC in Pak (1971), but a borrowing from the Song Dynasty Chinese in Arisaka (1936) and Kōno (1979).

Third, the understanding of Chinese historical phonology, especially the distinction between the sound system of OC and MC, differs in some studies. For example, Lee Dukchun (1985:68) claims that no distinction between *shetou* (alveolar stop and nasal) and *sheshang* (retroflex stop and nasal) initials in SK results from the influence of OC, arguing that one of the biggest differences between OC and MC lies in the fact that the *sheshang* initial group in MC does not exist in OC. However, no distinction between *sheshang* and *shetou* is viewed as one of the features in SK reflecting the EMC sound system in Zhang (2008:5). According to Zhang (2008), the lack of *sheshang* initial group is a phenomenon not limited to OC but also lasts until EMC.

1.6 The methodology of this study

In order to overcome the limitations of previous studies, I will pay special attention to the following three points in this study.

First, I will employ a loanword phonology approach in the comparison between SK and MC. This study will discuss the adaptation strategy of Middle Chinese phonemes and examine the mismatch between ancient Chinese and ancient Korean phonological system. It is relatively difficult for us to state precisely the rule of adaptation in SK, but fortunately, the strategy of adaptation in the Mandarin loanwords in Modern Korean could give us a hint on this issue. The Mandarin loanwords transmitted into Modern Korean, such as [u.lung.tɕʰa] 烏龍茶 "oolong tea", [y.an] 元 "Chinese currency," in some sense, can tell us the strategy of adaptation from Chinese to Korean. Therefore, in order to have a better understanding on the adaptation strategy in SK, this study will include an investigation on the Mandarin loanwords in Korean.

Second, it is necessary to emphasize that a certain feature in SK can have many potential origins. In order to avoid jumping to a quick conclusion, to the best of my knowledge, all the possible reasons proposed in previous studies, including different layers of borrowing, difference between Chinese and Korean phonological systems, the internal change in Korean, and misreading, etc, will be examined in this study.

Third, the method to investigate the origin of SK lies in a close comparison between SK and Chinese in different periods. However, it should be noted that for each period, the sound system could vary from time to time and from place to place. So it is vague to state that a certain feature in SK is a reflection of OC or MC. In order to have a more accurate comparison between SK and different stages of Chinese, I will pay more attention to the

sound system as reflected in particular historical documents, such as *Qieyun* (601), *XXXX* (c.650), *JSYY* (747), *HLYY*(810), etc, to set up a reference for time and place.

1.7 The data of this study

1.7.1 Korean data

1.7.1.1 Main data

The main SK data to be examined in this study is *Hunmong jahoe* (hereafter *HMJH*) 訓蒙字會[Collection of characters for training the unenlightened], a character primer compiled in 1527 by Choe Sejin 崔世珍 (1473-1542), an expert in Chinese language who has been an official interpreter in the Korean embassy in Beijing. *HMJH* is the earliest extant character dictionary in Korea which reflects the reading of SK in real speech. Before *HMJH*, there was a rhyme book called *Dongguk jeongun* 東國正韻 (hereafter *DGJU*), which was compiled in 1447. As a prescribed SK system, *DGJU* does not reflect the reading in real speech. For example, the phonetic notation in this book includes voiced initial [b], [d] and [g], which do not exist in Korean.

Several versions of *HMJH* have appeared since its first print. The earliest extant edition is the *Yesan Mungo* 叡山文庫 edition (hereafter *YS* edition). The *HMJH* version that is investigated in this study is the *YS* edition published by the institute of East Asian studies in Dankook University in 1971. In this book besides the photocopied *YS* version, a photocopy of the *Donggyeong daehak* 東京大學 edition (hereafter *DD* edition) and a comprehensive introduction to *HMJH* written by Li Ki-Moon are also included.

In the preface of *HMJH* Choe criticized character premiers *Cheon ja mun* 千字文 and *Yuhap* 類合 because they failed to connect the Chinese character education with the

empirical world, arguing that learning Chinese characters should start from these Chinese characters which have content meanings, such as the name of birds, animal, grass and trees. As a result of this idea, many obscure Chinese characters that have content meanings were included in *HMJH*, whereas some basic Chinese characters, which play grammatical functions, were excluded.

HMJH gives both Sino-Korean and native Korean readings as well as definitions for 3360 characters. The following seven characters appear twice in *HMJH*: *tio* 朝, *ts^hiu/hoan* 萑, *tsia/tsiək* 炙, *kiu* 葵, *sa* 沙, *koan* 觀, *t^hiuk/iu* 柚, and *hαιη/hαιη* 行 appears three times. The reading given by Choe is based on real pronunciation at that time. In some cases Choe also provides the standard pronunciation when the popular reading is different from the standard pronunciation in his mind. For example, the notation for the character *ai* 埃 in *HMJH* is [ai], followed by a note saying that the standard reading is [Λi]. This shows that the pronunciation of the character *ai* 埃 was [ai] in SK at that time, although the standard pronunciation should be [Λi] in Choe's mind.

1.7.1.2 Supplementary data

Besides the main data source *HMJH*, in order to have a comprehensive understanding of the SK data, we will also compare *HMJH* with the data in other sources, which are listed below. It is worth noting that due to the difficult access of ancient documents, the supplementary data in this study is mainly cited from the collected readings of SK included in Kōno (1979). In addition, the SK reading in *DH*, *YJ* as well as the reading in the *JGG*, *NG*, *GJG*, *DG* editions of *HMJH* provided in this dissertation is cited from Ito (2007).

1.7.1.2.1 Character dictionary

(1) *Cheon ja mun*

Cheon ja mun (hereafter *CJM*) 千字文 is a Chinese character primer originally compiled by Zhou Xingsi 周興嗣 (470-521) in the Liang 梁 (502-557) Dynasty. The *Cheon ja mun* discussed here is the Hangul annotated edition, in which the meaning and Korean pronunciation of each character is provided.

(2) *Sinjung yuhap*

Sinjung yuhap (hereafter *YP*) 新增類合 is a Chinese character primer compiled by Yu Huichun 柳希春 (1513-1577). This book consists of two volumes and includes 3000 characters. The tonal notation is provided by drawing a circle to the left side of a character for the *shang* 上 tone and the right side for the *qu* 去 tone. No tonal notation is provided for *ping* 平 or *ru* 入 tone.

1.7.1.2.2 Rhyme books

(1) *Hwadong jeongeum tongseog ungo*

Hwadong jeongeum tongseog ungo 華東正音通釋韻考 (hereafter *HD*) was compiled in 1747 by Pak Seongwon 朴性源 (1697-1767) under the order of King Yeongjo 英祖 (1694-1776). The *hwa* 華 and *dong* 東 in the title of this book refers to China and Korea respectively. For each Chinese character, the standard pronunciation in SK, "*dongum* 東音," and the pronunciation in Chinese at that time, "*hwaum* 華音," is

provided in this book. At the top of each page, one can find the *sokum* 俗音 "popular reading" of some characters in SK.

(2) *Samun seonghwi*

Samun seonghwi 三韻聲彙 (hereafter *SU*) was compiled by Hong Gyehui 洪啓禧 (1703-1771) in 1751. Not following traditional Chinese rhyme books, which arrange characters according to the four tones, this book arranges characters according to SK readings' Hangul spelling. Both Korean reading and Chinese reading are provided in this book.

(3) *Gyujang jeonun*

Gyujang jeonun 奎章全韻 (hereafter *GJ*) is compiled by Lee Deok-mu 李德懋 in 1792 and published in 1796 under the order of King Jeongjo. The format of this book is to put four tones under four parallel sections in one page. This book also provides both the Chinese reading (*hwaum* 華音) and Sino-Korean reading (*dongum* 東音). The appendix of this book includes an index called *Okpyeon* 玉篇. With detailed introduction to the reading and definition of Chinese characters, this index can be viewed as one independent character dictionary, and it is traditionally called *Jeonun okpyeon* 全韻玉篇 (hereafter *OP*).

1.7.1.2.3 Hangul annotation of classics

Many projects were initiated to annotate the Buddhist and Confucius classics after the invention of Hangul. This result of these projects is a series of so-called *Eonhae* 諺解

"Hangul annotation" work, such as the Hangul annotated dharmic treasure altar-sutra of the Sixth Patriarch 六祖法寶壇經, Hangul annotated *Lunyu* 論語, etc. These materials are of particular importance because, as oppose to rhyme books which have the function of providing a potential artificial prescriptive standard, the reading in these Hangul annotated classics is more faithful to the real pronunciation.

1.7.2 Chinese data

1.7.2.1 Main data

1.7.2.1.1 *Qieyun*

Qieyun 切韻, chiefly edited by Lu Fayuan 陸法言 (581-618), was compiled in the first year of the Renshou 仁壽 era (601 AD) of the Sui 隋 Dynasty. Despite the debate on the nature of *Qieyun*, according to Pan Wuyun and Zhang Hongming (2013), *Qieyun* mainly reflects the literacy pronunciation system of Nanjing 南京 and Luoyang 洛陽 around the 7th century. *Qieyun* has been lost and only fragments of it are available. There are several expansions and revisions of *Qieyun* after the Tang, of which the two most complete versions are *Kanmiu buque qieyun* 刊謬補缺切韻[Corrected and supplemented *Qieyun*], which is compiled by Wang Renxu 王仁昉 (c.656–c.710) in the Tang Dynasty, and *Dasong chongxiu guangyun* 大宋重修廣韻 (shortened to *Guangyun* 廣韻) [The revised dictionary of rhymes of the Song Dynasty], which is compiled by Chen Pengnian 陳彭年 (961–1017) in the Northern Song Dynasty. The so-called *Qieyun* system is actually the one reflected through these two books. The *Qieyun* series of rhyme

dictionaries are the central documentary sources in the reconstruction of Middle Chinese phonology.

1.7.2.1.2 Xuanying's *Yiqie jing yinyi*

According to Zhou Fagao (1948), Xuanying 玄應 (? - 661) was a monk in the Dazongchi 大總持 temple and the Dacien 大慈恩 temple in Chang'an 長安. He joined Xuanzang's 玄奘 (602-664) Buddhist classics translation project in the 19th year of the Zhenguan 貞觀 reign (645 AD) and was probably died in the first year of the Longshuo 龍朔 reign (661 AD) in the Tang Dynasty. Xuanying's *Yiqiejing yinyi* (abbr. *XYYY*) 一切經音義 [The sound and the meaning of all scriptures] was compiled around 650 AD. The *fanqie* in *XYYY* reflects the sound system of the Chang'an dialect in the middle 7th century. Our understanding of the phonological system of *XYYY* is mainly based on Zhou Fagao (1948) and Wang Li (1982).

1.7.2.1.3 *Jinshu yinyi*

Jinshu yinyi (hereafter *JSYY*) 晉書音義 [The sound and the meaning of *Jinshu*] was written by He Chao 何超 in the Tang Dynasty. The preface of this book was written by Yang Qixuan 楊齊宣 in the sixth year of the Tianbao 天寶 reign (747 AD). In this preface Yang mentioned that He Chao was a scholar from Eastern capital, i.e., Luo Yang 洛陽. Therefore, the *fanqie* in this book is a reflection of the sound system of Luoyang in the middle 8th century. Our understanding of the sound system in *JSYY* is based on the investigation conducted in Shao Rongfen (1981).

1.7.2.1. 4 Huilin's *Yiqie jing yinyi*

Huilin 慧琳 (737 – 820) was a monk in the Ximing 西明 temple during the Zhenyuan 貞元 and Yuanhe 元和 reigns in the Tang Dynasty. The *Yiqie jing yinyi* 一切經音義 [The sound and the meaning of all scriptures] (abbr. *HLYY*) compiled by Huilin has one hundred volumes. According to *Song gaoseng zhuan* 宋高僧傳 [a collection of biographies of Buddhist monks] written by Zanning 贊寧 (919-1001), Huilin started to write this book in the fourth year of the Zhenyuan 貞元 reign (788) and ends in the fifth year of the Yuanhe 元和 reign (810). According to the preface in *HLYY*, the *fanqie* provided in this book is based on the Qin 秦 pronunciation, which refers to the sound system in the region around Chang'an. Therefore, the *fanqie* in *HLYY* is a reflection of the sound system in the Chang'an dialect in the late 8th century to early 9th century. The analysis of *HLYY* in this study heavily relies on Huang Cuibo 黃淬伯 (1931), which categorized the initial, final and tonal system of *HLYY*.

1.7.2.1.5 Shao Rong's *Shengyin changhe tu*

Shengyin changhe tu 聲音唱和圖 [The graph of matching sounds] is a chart included in *Huangji jingshi* 皇極經世 [Book of supreme world ordering principles], a Daoist treatise written by philosopher Shao Yong 邵雍 (1011-1077) in the Northern Song Dynasty (960-1126). This chart is arranged according to the initial and rhyme system in Bianliang 汴梁 (aka. Kaifeng 開封) and Luoyang 洛陽 in the 11th century. The information in this chart serves as one of the major sources of evidence used to

reconstruct the sound system of the Luoyang dialect in the Northern Song Dynasty in Zhou Zumo (1966).

1.7.2.1.6. Rhyme tables in the Song Dynasty

A rhyme table is a phonological table by arranging Chinese characters according to their tones, initials and rhymes to indicate their pronunciations. The earliest rhyme tables are used to assist the understanding of the sound system in *Guangyun*, such as *Yunjing* 韻鏡 [Mirror of rhymes] and *Qiyinlue* 七音略 [Summary of the seven sounds]. However, later rhyme tables are made based on the sound system in the spoken language at that time, including *Sisheng dengzi* (abbr. *SSDZ*) 四聲等子 [A measurement criteria of sounds] and *Qieyun zhizhangtu* (abbr. *QYZZT*) 切韻指掌圖 [An easy guide to *Qieyun*]. There is no clear information about the author and the exact date of *SSDZ*. However, the information reflected in *SSDZ* shows that it was probably a work from the early Southern Song period. *QYZZT* is a rhyme book attributed to Sima Guang 司馬光 (1019-1086), a famous chancellor and scholar who lived in the Song Dynasty, although the real author of this book is uncertain. Sun Yi 孫奕, a Southern Song Dynasty scholar, cited *QYZZT* in his work, suggesting that *QYZZT* existed in the Southern Song. These two rhyme tables are more valuable than earlier rhyme tables in the sense of reflecting the sound system in the real speech.

1.7.2.2 Supplementary data

1.7.2.2.1 Transliteration

Transliteration materials refers to the Chinese transcription of foreign words in ancient texts, particularly Sanskrit Buddhist terms and mantras, as well as the ways Chinese words were written in foreign alphabets. The writing system of Chinese does not reflect the phonetic value, but transliteration data gives us a hint as to the phonetic value of ancient Chinese.

1.7.2.2.2 Sino-Japanese

Sino-Japanese refers to the reading of Chinese characters in Japan. *Kan-on* 漢音 is believed to be a reflection of the Chang'an dialect in the 8th century, when the Japan government sent ambassadors, students and monks to Tang China. An older tradition of Sino-Japanese is known as *Go-on* 吳音, which is probably based on the classical pronunciation of Chinese character in the Wu 吳 area during the Southern Dynasties. Sino-Japanese can provide a valuable reference point in the study of the origin of SK, though it should also be noted that Sino-Japanese is undoubtedly subject to adjustment from the processes of adaptation and sound change that have occurred in Japanese.

1.8 The Phonology of Middle Chinese and Middle Korean

1.8.1 Middle Chinese phonology

In order to study the relationship between MC and SK, I will compare the *Qieyun* system and SK in this study. *Qieyun* has a pivotal position in the history of Chinese phonology. On the one hand, it is a watershed between Old Chinese and Middle Chinese. On the other hand, the later development from Middle Chinese to Modern Chinese can be observed by comparing the *Qieyun* system and later stage Chinese. The phonetic

reconstruction of the *Qieyun* provided in this study is based on Pan and Zhang (2013).

Below is Pan and Zhang's (2013) reconstruction of the initial system in *Qieyun*.

(7)

幫 series	幫 p	滂 p ^h	並 b	明 m			
端 series	端 t	透 t ^h	定 d	泥 n	來 l		
知 series	知 t̚	徹 t̚ ^h	澄 d̚	娘 ŋ			
精 series	精 ts	清 ts ^h	從 dz	心 s	邪 z		
莊 series	莊 tʂ	初 tʂ ^h	崇 dz̥	生 ʂ			
章 series	章 tʂ̥	昌 tʂ ^h	禪 dz	書 ʃ	船 z	日 ŋ̊	以 j
牙 velars	見 k	溪 k ^h	群 g	疑 ŋ			
喉 glottals	影 ʔ	曉 h	匣 ɦ				

Before introducing the rhyme system of *Qieyun*, it is necessary to explain two important concepts in historical Chinese phonology. First, *Qieyun* categorized initials according to *kaihe* 開合 (open/close mouth). Initials in MC can be divided into two types, namely normal and rounded. Initials with normal consonant are referred to as *kaikou* 開口, the rounded initials C^w are referred to as *hekou* 合口. Second, in Chinese historical phonology the concept *deng* 等 (division) is used to describe the medial of a syllable. According to Pan and Zhang (2013: 4), div.1 and div.4 have no medial, div.2 has -y medial, div.3/3A has -i medial and div.3B has -yi medial. Pan and Zhang (2013: 4) proposed the following underlying form and surface form for the final system in *Qieyun*.

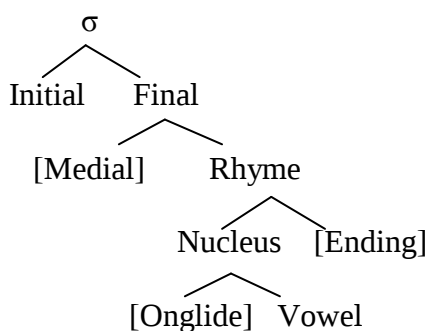
(8)

Phoneme	a				e			i
Division	1	3(i)	2(y)	3(i)	2(y)	3(Ai)	4	3(Ai)

						B(yi)		B(yi)
Vowel Coda	ɑ	a	æ		ɛ	E	e	i
-ø	歌		麻二	麻三	佳	支		脂
-ŋ	唐	陽	庚二	庚三	耕	清	青	
-m	談	嚴(凡)	銜		咸	鹽	添	侵
-n	寒		刪		山	仙	先	真(臻)
-i	泰	廢	夬		皆	祭	齊	
-u	豪		肴			宵	蕭	幽
Phoneme	ə		o				u	
Division	1	3(i)	2(y)	3(i)	1	3(i)	1	3(i)
Vowel Coda	ə	i	ə	ɤ	o	ɔ	u	
-ø		之		魚	模	虞	侯	
-ŋ	登	蒸	江		冬	鍾	東 1	東 3
-m	覃							
-n	痕	殷		元	魂			文
-i	哈	微			灰			
-u		尤						

MC has four tones, namely *ping* 平 (level tone), *shang* 上 (rising tone), *qu* 去 (departing tone) and *ru* 入 (entering tone). There is no conclusion for the tonal value of each tone. A general accepted description on MC tones can be expressed as follows: *ping* tone is a level tone, *shang* tone a rising tone, *qu* tone a falling tone, and *ru* tone an abrupt tone (Pan and Zhang 2013). According to Pan and Zhang (2013), the syllable structure in *Qieyun* system can be expressed as below.

(9)



The one with "[" is optional, as in the position of medial, glide and ending. The medial includes -i- and -y-, and the ending includes -i/-u/-m/-n/-ŋ/-p/-t/-k. The on-glide ɰ has no phonetic value and it is only a part of nucleus.

1.8.2 Middle Korean phonology

An accurate record of ancient Korean's phonological system has been available since the 15th century, when Hangul, an alphabetic writing system, was presented in *Hunmin jeongeum* (hereafter *HMJE*) 訓民正音 [Correct sounds to instruct people], which was created in 1443 and promulgated in 1446. Although it would be ideal to compare MC with Old Korean (Korean up to Unified Silla(935 AD)), the understanding of Old Korean is still quite limited due to the scarcity of Old Korean phonological documents. Therefore, this paper will compare MC and the phonemic system of the 15th century Middle Korean. Below is the consonant system of 15th century Middle Korean proposed by Lee Ki-Moon (1972[2007]) with a little revision.

(10)

Place of	voiceless	voiceless	tensed		nasal	liquid
----------	-----------	-----------	--------	--	-------	--------

articulation	unaspirated	aspirated				
labial	ㅍ p	ㅍ ^h p ^h	ㅍㅍ pp	ㅂ v	ㅁ m	
dental	ㅌ t	ㅌ ^h t ^h	ㅌㅌ tt		ㄴ n	ㄹ l
palate-alveolar	ㅈ ts, ㅅ s	ㅈ ^h ts ^h	ㅈㅈ ss	ㅊ z		
velar	ㄱ k	ㄱ ^h k ^h	ㄱㄱ kk		ㅇ ŋ	
glottal	ㅎ h		ㅎㅎ hh	ㅇ ø		

The only revision to Lee Ki-Moon's (1972) proposal in this study is the sound value of the ㅇ symbol. Lee (1972) concludes that the phonetic nature of the ㅇ symbol is voiced fricative [ɦ]. However, Pak (1971) claims that the -ㅇ, as in Modern Korean, is used in the initial position to indicate a zero-initial syllable. Pak (1971:306) states that according to *Hunmin jeongeum yehae* 訓民正音例解 [The explanation of the script in *Hunmin jeongeum*], the sound represented by this symbol is "light and void" and cannot be used in the final position. In this study I will treat this symbol as a zero initial, as Pak (1971) suggests.

The system of monophthongs in the 15th century Middle Korean, as shown in *HMJE*, is generally accepted as follows (Lee Ki-Moon 1972[2007]:151):

(11)

High	ㅣ i	ㅡ i	ㅜ u
Mid		ㅓ ㅓ	ㅗ o
Low		ㅑ a	ㅓ ㅓ

Diphthongs can be divided into on-glide diphthongs and off-glide diphthongs based on the order in which the glide appears. Middle Korean has both on-glide diphthongs and off-glide diphthongs. The following chart is quoted from Ito (2007:5).

(12)

ㅑ ia	ㅓ iə	ㅗ io	ㅜ iu			
ㅛ oa	ㅜə					
ㅕ ai	ㅖ əi	ㅟ oi	ㅠ ui	ㅛ li	ㅜ ii	ㅣ i[ij]
	ㅖ iəi		ㅠ iui			
ㅛ oai	ㅜəi					
	ㅠ iuiəi					

There are in total 8 codas in Middle Korean, including *-p*, *-t*, *-k*, *-m*, *-n*, *-ŋ*, *-s* and *-l*. The coda clusters in the Korean orthography are single consonants in real pronunciation (Lee 1972, Ito 2007). According to Kōno (1979), the syllable structure in Middle Korean is "IMVF," in which "I" refers to Initial, "M" Medial, "V" nuclear vowel and "F" Final vowel. In *HMJE*, tones in 15th century Middle Korean were notated by placing dots to the left of a word. One dot indicates a *qu* tone, two dots indicate a *shang* tone, and no dot indicates a *ping* tone. For example, 활 [hoal], 돌 [tol], 갈 [kal] and 붙 [put] have *ping* tone, *shang* tone, *qu* tone and *ru* tone respectively. In *Nogeoldae eonhae* 老乞大諺解 [Hangul annotated *Nogeoldae*] and *Paktongsa eonhae* 朴通事諺解 [Hangul annotated *Paktongsa*], Choe Sejin states that "the tones in Korean can be divided into *ping* 平 (level) and *ze* 仄 (oblique). The tone that is mournful and calm belongs to *ping* tone, the tone that is stern and lifts belongs to *shang* tone, the tone that is straight and high belongs

to *qu* tone and *ru* tone."¹² Based on this description, the phonetic value of tones in Middle Korean can be summarized as follows: *ping* tone is a level tone, *shang* tone a low-rising tone, and *qu/ru* tone a high tone.

1.9 The structure of this study

The structure of this dissertation is organized as follows. Chapter 1 is the introduction section, discussing the purpose and methodology of this study as well as the background information of this study, including the history of Chinese phonology, Korean phonology and Sino-Korean phonology. Chapter 2 will focus on the theory of loanword phonology, which will be examined through a case study of the Mandarin loanwords in Modern Korean. Chapter 3, chapter 4 and chapter 5 investigate the initials, rhymes and tones in Middle Sino-Korean respectively. Chapter 6 compares the sound system of Middle SK and Middle Chinese as shown in different materials, paying special attention to those features which could give us a hint regarding the origin of SK. Based on the discussion in Chapter 6, I will propose my conclusion as to the origin of Modern SK in Chapter 7.

¹²凡本國語音有平有仄....哀而安者為平聲,厲而舉者為上聲,直而高者為去聲入聲。

Chapter 2 Mandarin Loanwords in Modern Korean

Since late 20th century, Modern Korean has adopted many Chinese proper names, such as brand names and place names, based on the pronunciation in Modern Mandarin. Below are some examples.

(1)

Word	Meaning	Mandarin	Adapted Form	Sino-Korean
烏龍茶	oolong tea	u.lung.tɕʰa	u.lung.tɕʰa	o.jong.tɕʰa
哈爾濱	Harbin	xa.ər.pɪn	ha.ʌl.pɪn	ha.i.pɪn
元	Chinese currency	yɛn	y.an	wən

In this chapter I will analyze the adaptation of these Mandarin loanwords from the perspective of loanword phonology. The result of this study will hopefully help us to better understand the mechanism of loanword adaptation as well as the nature of Sino-Korean phonology. Before we proceed to the discussion on the adaptation of Mandarin loanwords, in the following sections I will first introduce Mandarin and Korean phonology.

2.1 Mandarin phonology

The Mandarin phonological system will be discussed following the order of consonants, vowels, syllable structures and tones.

2.1.1 Mandarin consonant

2.1.1.1 The number of consonants

Most scholars agree that Mandarin has 22 consonants (eg. Cheng 1973, Dong 1996), while Lin (2007) and Duanmu (2000) claim that the $-j[tɕ]$, $-q[tɕʰ]$, $-x[ɕ]$ are not consonant phonemes in Mandarin. Lin (2007: 48) notes that "these three consonants belong to one set of consonants that is in complementary distribution with the other three sets of consonant: the dental affricate/fricative, the post-alveolar affricates/fricative, and the velars," and "these three consonants are not independent phonemes but allophones that occur only before high front vowels/glides."

In this paper we will not follow Lin's (2007) viewpoint for the following two reasons. First, as Cheng (1973) states, $-j[tɕ]$, $-q[tɕʰ]$, $-x[ɕ]$ can be treated as distinctive phonemes in Mandarin since there is no compelling phonological evidence in choosing either $-z[ts]$, $-c[tsʰ]$, and $-s[s]$ or $-g[k]$, $-k[kʰ]$, and $-h[x]$ as the phoneme of $-j[tɕ]$, $-q[tɕʰ]$, and $-x[ɕ]$. Second, one of the principles to determine if a sound is a phoneme is to judge if the sound is perceived to be different by native speakers. For example, there is no minimal pair for the sounds $[h]$ and $[ɣ]$ in English, and these two sounds can be shown to be in complementary distribution. Although this fact can be used to argue that they are allophones of the same phoneme, they are so different phonetically that they are still considered different phonemes. For native Mandarin speakers, the sounds $-j[tɕ]$, $-q[tɕʰ]$, and $-x[ɕ]$ are different from $-z[ts]$, $-c[tsʰ]$, and $-s[s]$ or $-g[k]$, $-k[kʰ]$, and $-h[x]$, so it is reasonable to treat them as distinctive phonemes.

2.1.1.2 The sound value of Mandarin consonants

The major debate over the sound value of Mandarin consonants is about the pinyin *-r* sound, which is viewed as a voiced fricative [ʐ] (Karlgren 1940, Dong 1996), or an approximant [ɹ] (Fu 1956, Wang 1983, Duanmu 2000, Lin 2007), or a retroflex approximant [ɻ] (Zhu 1982). In addition, some scholars claim that the phonetic value of the Mandarin *-r* is different according to the phonetic environment. It has two allophones in terms of frication, namely, voiced fricative [ʐ] and frictionless continuant [ɹ]. However, in terms of manner of articulation, the Mandarin *-r* can be described as [ɹ] (Liao and Shi 1987). Treating the *r* as [ʐ] has an advantage that the [ʃ] and [ʐ] are in one pair, which only differs in the feature of [+/- voiced]. However, it also causes a problem in the phonemic system of Mandarin since there are no other voiced fricatives. In addition, from the perspective of perception, Mandarin *-r* and the [ɹ] in English are perceptually similar (Lin 2007:45). Therefore, in this study I will transcribe the pinyin *-r* symbol as [ɹ] in IPA.

2.1.1.3 The place of articulation of consonants

First, Lin (2007:41) claims that the Mandarin [t], [tʰ], [n], and [l] can be dentals or alveolar or both depending on the speaker. In Lin (2007), they are treated as dentals, just like -z[ts], -c[tsʰ], and -s[s]. However, Dong (1996) claims that generally [t], [tʰ], [n], and [l] are similar to alveolar, while -z[ts], -c[tsʰ], and -s[s] are similar to dentals. In this study I will follow Dong (1996) to treat [t], [tʰ], [n], and [l] as alveolars and [s], [ts], and [tsʰ] as dentals.

Second, zh[tʂ], ch[tʂʰ], and sh[ʂ] have been referred to as retroflex sounds since Chao (1948, 1968). However, Lin (2007) states that phonetic studies have shown that these sounds are not retroflexes in the normal sense in the speech of the speakers of the Beijing

dialect. Lin (2007) named the -zh[tʂ], -ch[tʂʰ], and -sh[ʂ] as post-alveolar consonants. Some scholars claimed that Standard Chinese speakers produce the constriction for -zh[tʂ], -ch[tʂʰ], -sh[ʂ] with the upper surface of the tip of the tongue. This makes these sounds laminals rather than apical post-alveolars (Ladefoged and Maddieson 1996:150-154). In this study I will follow the traditional viewpoint to treat the -zh[tʂ], -ch[tʂʰ], and -sh[ʂ] as retroflexes.

2.1.1.4 Summary

Based on the above discussion, the inventory of Mandarin consonants can be listed as below.

(2)

	Bilabial	Labiodentals	Dento-Alveolar	Alveolar	Retroflex	Palatal	Velar
plosive	p p ^h			t t ^h			k k ^h
Nasal	m			n			ŋ ¹³
Fricative		f	s		ʂ	ɕ	x
Affricate			ts ts ^h		tʂ tʂ ^h	tɕ tɕ ^h	
Approximant					ɹ		
Lateral Approximant				l			

2.1.2 Mandarin vowel

¹³ [ŋ] occurs only in the coda position.

Vowels can be divided into monophthongs and diphthongs. A monophthong is a vowel consisting of one articulation from the beginning to the end while a diphthong is a vowel including two articulations.

2.1.2.1 Mandarin Monophthong

According to traditional analysis, at the surface representation (SR) there are 12 Mandarin vowels, which are [a, ɑ, ɛ, e, ɤ, o, ə, ʊ, ɿ, i, y, u] (Cheng 1973). From a practical perspective, as reflected in the pinyin system, Mandarin has six vowels in its underlying representation (UR), namely, [a, o, e, i, u, y]. However, there is debate on these opinions and we will discuss this in the following section.

2.1.2.1.1 High vowel

The two high vowels [i] and [u] are accepted as phonemes without debate. Scholars have long debated about if the Mandarin vowel ü [y] is a monophthong or not. Scholars such as Wu (1994), Chao (1968) and Pulleyblank (1983) claim that [y] should be considered as a complex segment, which is composed of [ui] or [iu]. However, scholars such as Cheng (1973) claim that treating [y] as a complex segment not only has no historical evidence, but also is not supported by linguistic proofs. In this paper we think that the vowel [y] should be treated as a monophthong since from the perspective of articulation there is no tongue movement in the production of the vowel [y].

Another much debated question is the sound value of the two apical vowels [ɿ] and [ʊ]. Many scholars treat these two vowels as apical vowels (Karlgren 1926, Cheng 1973, Dong 1997). However, considering their characteristics, such as dental articulation and

retroflexion, some scholars regard these two vowels as syllabic consonants (e.g. Pulleyblank 1983, Fu 1986). Duanmu (2000) treats them as syllabic consonants ([ʐ], [ʀ]). Lin (2007) argues that the two apical vowels are the syllabic consonant [ɹ] and function like vowels. In this paper I will treat them as vowels for the convenience of description. If the [ɹ] and [ʀ] are not vowels, it would be complicated to explain the correspondence between these two vowels and the Korean vowel [ɯ] in the Mandarin loanwords in Korean. Because using one symbol [ɹ] to represent two vowels may cause confusion since these two sounds are not identical phonetically, in order to distinguish the two vowels, I will still use the symbols [ɹ] and [ʀ].

Scholars have different opinions about the underlying form of the two apical vowels [ɹ] and [ʀ]. The vowel [ɹ] appears only after the dental affricates and fricative in syllable final position, while the [ʀ] appears only after retroflex (post-alveolar) consonants in syllable final position. The places of articulation of these two vowels are the same as that of the preceding consonant. Cheng (1973) argues that the two vowels are the allophones of the mid high vowel [i]. However, some scholars view the [ɹ], [ʀ] and [i] as the allophones of the underlying [i] since these three sounds are in complementary distribution. Given the predictability of the occurrence of [ɹ] and [ʀ], in this paper I will regard [i] as the UR of [ɹ], [ʀ] and [i].

2.1.2.1.2 Mid vowel

The surface forms of Mandarin mid vowels include [e, o, ɤ, ə]. Lin (2007:76) states that there is only one mid vowel in Mandarin, namely [ə], based on the distribution of these four vowels:

(3)

[ə] before consonants

[e] in a diphthong followed by [i] or in syllable final position preceded by [j]/[ɥ]

[o] in a diphthong followed by [u] or in syllable final position preceded by [w]

[ɤ] in syllable final position in a CV syllable.

As shown above, all of these four mid vowels appear in different phonetic environments. The appearance of [e, o, ɤ] is predictable if the underlying form is set as [ə]. Therefore, in this paper I will follow Lin (2007) to use [ə] as the underlying phoneme for the Mandarin mid vowels.

2.1.2.1.3 Low vowel

In the surface form there are two low vowels in Mandarin, [a] and [ɑ]. However, these two low vowels are in complementary distribution, as shown below.

(4)

[a] in the syllable final position, diphthongs ending in [i] or before [n]

[ɑ] in diphthongs ending in [u] or before [ŋ]

Since [ɑ] occurs in predictable contexts, we will treat [a] as the unique low vowel in the underlying form. In addition, when the low vowel is between [j]/[ɥ] and [n], the vowel becomes fronted and raised to [ɛ]. The [ɛ] sound occurs in a predictable phonetic environment, so I will choose [a] as the underlying form of the sound [ɛ].

2.1.2.1.4 Retroflexed vowel

The retroflex vowel [ʂ] occurs in the rime *er* in Mandarin. It is also called rhotacized (r-colored) vowels or rhotic vowels. Scholars have long debated if this retroflex vowel [ʂ] is an independent phoneme. It is regarded as an independent vowel in Dong (1997:16) but not in Duanmu (2007) and Lin (2007). In this paper we agree that this retroflex vowel [ʂ] is not a phoneme for the following reasons: First, no onset consonant can appear before the rime *er*. Second, the retroflex or the rhotacization vowel is not an independent vowel, rather merely a rhotacized feature, which can be added to any vowel. For example, the morpheme *ba* "handle" becomes *bar* "handle" after the *r*-suffixation.

2.1.2.1.5 Summary

Based on the discussion above, the inventory of Mandarin vowels in both SR and UR can be listed as below.

(5) The inventory of Mandarin vowels (SR)

	Front		central	Back	
	unrounded	rounded		unrounded	rounded
High	i, ɿ	y		ɯ	u
Mid	e		ə	ɤ	o
Mid-Low	ɛ				
Low			a	ɑ	

(6) The inventory of Mandarin vowels (UR)

	Front	central	Back
--	-------	---------	------

	unrounded	rounded		unrounded	rounded
High	i	y			u
Mid			ə		
Mid-Low					
Low			a		

2.1.3 Mandarin syllable

2.1.3.1 The structure of Mandarin syllables

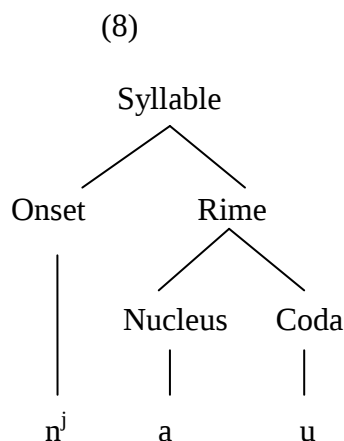
In traditional Chinese phonology tone is considered a property of the whole syllable and a Chinese syllable consists of an initial and a final. An initial is a syllable-initial consonant, and the place of the initial in Mandarin can be unoccupied, referred to as the zero-initial. A final is composed of a medial and a rhyme. The medial in Chinese is the glide before the nuclear vowel, including [i], [u], and [y], or more accurately [j], [w], and [ɥ]. The rhyme contains a nucleus and an ending. The nucleus is the main vowel and it is the essential element in a Mandarin syllable. In other words, nucleus must exist in a Mandarin syllable, while the other elements are optional. The ending can be either the vowels [i/u] or the nasals [n/ŋ]. The structure of a Mandarin syllable can be drawn as below.

(7) The traditional description of Mandarin Syllable structure

Initial	Final		
	Medial	Rhyme	
		Nucleus	Ending
(C)	(G)	V	(V/C)

	i, u, y	TBU	i, u, n, ŋ
--	---------	-----	------------

Although the traditional description of Mandarin syllable structure places the medial under the unit of the final, some scholars (eg. Duanmu 1990, 2000, Lin 2007) claimed that a medial should be placed in the onset position of a syllable. Duanmu (1990) provides the evidence that the Mandarin [hu] and [f] are changed to [f] and [hu] in Santai dialect in Sichuan. For example, the Mandarin [huei] "ash" is pronounced as [fei] and Mandarin [fei] "fly" as [huei] in Santai. The syllable structure of Mandarin syllable *niao* "bird", according to Duanmu (1990, 2000), can be expressed as below.



In this paper we will follow the traditional viewpoint, according to which a medial is placed under a final, for the convenience of comparing the syllable structures between Korean and Mandarin. Based on the discussion above, the structure of a Mandarin syllable is (C)(G)(V)(C/V). The longest syllable is CGV(C/V), and the shortest syllable is V. The table below lists all the possible types of mandarin syllables. The examples are cited from Lin (2007) and we provided the Chinese character for each example.

(9) Types of Mandarin syllables

	Pinyin	IPA	Character	Meaning
1.V ¹⁴	è	[ɤ]51	餓	hungry
2.CV	mǎ	[ma]214	馬	horse
3.GV	yā	[ja]55	鴨	duck
4.CGV	duō	[two]55	多	many
5.VC	ān	[an]55	安	peace, safe
6.VV	ài	[ai]51	愛	love
7. CVC	l án	[lan]35	藍	blue
8. CVV	l ái	[lai]35	來	come
9. GVC	y án	[jɛn]35	鹽	salt
10. GVV	y ào	[jau]51	藥	medicine
11. CGVC	hu àn	[xwan]51	換	to exchange
12. CGVV	hu ǎi	[xwai]51	壞	bad

2.1.3.2 Phonotactic constraints in Mandarin

There are phonotactic constraints on what sequences of segments can be combined in Mandarin syllables. Since not all initials can combine with every final, the real number of Mandarin syllable is less than the number of potential syllables in Mandarin. Some constraints on the combination of initial and finals are shown as below.

(10)

¹⁴ There are also syllabic consonants in Mandarin, such as answering words [ŋ] 嗯 and [ŋ] 恩.

1. Bilabials [p, p^h, m], alveolars [t, t^h], retroflexes [ʈʂ, ʈʂ^h, ʂ] and dento-alveolars [ts, ts^h, s] cannot combine with the high front round vowel [y].
2. The labiodentals [f] and velars [k, k^h, x] cannot combine with [i, y].
3. Palatals [tɕ, tɕ^h, ɕ] can only combine with [i, y].
4. The [ŋ] consonant cannot appear in the onset position.

In addition to the syllables prohibited by such restrictions, some particular types of Mandarin syllables are not seen in Mandarin. This can be viewed as an accidental gap. For example, there are no such syllables in Mandarin: [ʧa], [ʧaŋ], [ʧəŋ], [kwəŋ], [tia], [nia], [tin], [tiaŋ], [lwei] and [nwəŋ] (Lin 2007:120).

2.1.4 Mandarin tones

In Mandarin there are four lexical tones, namely 55, 35, 214 and 51 according to the five point scale devised by Chao (1930), in which 1 indicates the lowest pitch and 5 indicates the highest pitch. The most well-known example of the four tones in Mandarin is shown as below.

(11)

Tone name	Phonological description	Chao tone numerals	Chinese character	Gloss
Tone 1	High level	ma 55	媽	mother
Tone 2	Mid rising	ma 35	麻	hemp
Tone 3	Low dipping	ma 214	馬	horse

Tone 4	High falling	ma 51	罵	scold
--------	--------------	-------	---	-------

In addition to these four phonemic tones, there is a neutral tone. The neutral-tone syllable is an unstressed syllable shorter than a normal syllable. For example, the suffix *zi* in *yizi* "chair" is a neutral tone syllable, which is shorter than the *zi* in the word *zin ü* "son and daughter". The pitch of the neutral tone is characterized as half-low after /H/ [55], middle after /LH/ [35], half-high after /L/ [21], and low after /HL/ [51] (Chao 1968).

2.2 Korean phonology

2.2.1 Korean consonant

There are six major dialects in Korean, which are the Central dialect, Southeast dialect, Southwest dialect, Northeast dialect, Northwest dialect and Jeju dialect (Pak Jeongbong 2009). In this paper we will introduce the phonological system of Standard Korean, known as "Standard Korean Pronunciation (SKP)". Although the SKP is highly similar to the phonological system of the Seoul Korean, they are not exactly the same. The "Standard Korean Pronunciation (SKP)" is based on the document "Pyojun bareum beop" 표준발음법 [Standard pronunciation law] published in 1988 and implemented in 1989 by the Korean government. Many scholars pointed out that the SKP is slightly different from Seoul speakers' real speech (eg. Lee and Ramsey 2000, Shin et al. 2012). In the following section, I will introduce the SKP first and discuss the difference between the SKP and Seoul speakers' real speech where necessary.

According to the SKP, there are 19 consonants in Korean. This is also true in Seoul Korean (eg. Shin et al. 2012, Sohn 1999, Lee and Ramsey 2000). However, there is

debate about how to transcribe some of the 19 consonants. The first controversy is about the tense consonants¹⁵ -pp ㅍㅍ, -tt ㅌㅌ, and -kk ㅋㅌ in Korean. In the IPA Handbook (1999) these consonants are transcribed as [b, d, g]. However, under the heading of conventions, it says that these [b, d, g] are voiceless unaspirated (or slightly aspirated) lenis plosives [b̥, d̥, g̥] in the beginning of a syllable, but are regularly realized as voiced sounds in intervocalic position. Shin et al. (2012) shows that, in phonetic graphs none of these consonants are accompanied with any vibration syllable-initially and these three tense consonants become [b̥, d̥, g̥] in intervocalic position. In other words, the voicing of these three tense consonants in the intervocalic position is the result of assimilation, which is predictable, and the underlying form should be voiceless. Therefore, the [b, d, g] symbols, which notate voiced consonants conventionally, will not be used to transcribe the tense consonants in Korean in this research. In this study we will follow the notation in Shin et al. (2012), which transcribes Korean tense consonants as [p*, t*, k*].

Second, the transcription of the palatal consonants -c ㅈ, -cc ㅉ, -ch ㅊ is controversial among scholars. Shin et al. (2012) transcribe these consonants as [tɕ, tɕ*, tɕʰ], while the IPA handbook (1999) transcribes these consonants as [ɟ, c, cʰ]. The transcription in the IPA handbook is contradictory to itself. On page 120 of IPA handbook (1999) the [c, cʰ, ɟ] in Korean is placed under the column of "affricate," but these symbols [c, cʰ, ɟ] are plosive according to the IPA chart in page ix. Therefore, I will not adopt the transcription of the IPA handbook (1999) and I will follow Shin et al.'s

¹⁵ The symbol before the Hangul alphabet is the Yale Romanization of Korean. The complete list of the Yale Romanization of Korean alphabet is shown as follows: ㅁ -p, ㅂㅂ -pp, ㅍㅍ -ph, ㅁ -m, ㅌ -t, ㅌㅌ -tt, ㅌㅌ -th, ㄴ -n, ㄴ -l, ㅈ -c, ㅉ -cc, ㅊ -ch, ㅋ -k, ㅌㅌ -kk, ㅋㅌ -kh, ㅇ -ng, ㅅ -s, ㅆ -ss, ㅎ -h.

(2012) transcription of the palatal consonants in Korean. Based on the discussion above, the inventory chart of Korean consonants can be listed as below.

(12)

		Bilabial	Alveolar	Alveolo-palatal	Velar	Glottal
Plosive	Lax	p (ㅍ)	t (ㅌ)		k (ㄱ)	
	Tense	p* (ㅍㅍ)	t*(ㅌㅌ)		k*(ㄱㄱ)	
	Aspirated	p ^h (ㅍᄆ)	t ^h (ㅌᄆ)		k ^h (ㄱᄆ)	
Fricative	Lax		s (ㅅ)			h (ㅎ)
	Tense		s*(ㅅㅅ)			
Affricate	Lax			te (ㅈ)		
	Tense			te*(ㅈㅈ)		
	Aspirated			te ^h (ㅈᄆ)		
Nasal		m (ㅁ)	n (ㄴ)		ŋ (ㅇ)	
Liquid			l (ㄹ)			

2.2.2 Korean vowel

In terms of vowels, the SKP is slightly different from Seoul speakers' real speech. The vowel system of SKP and that of the Seoul Korean will be introduced below.

2.2.2.1 Monophthongs

According to the SKP, there are ten monophthongs in Standard Korean, which are listed as follows:

(13)

	Front		Back	
	unrounded	rounded	unrounded	rounded

High	i ㅣ	y ㅟ	ɯ —	u ㅜ
Mid	e ㅔ	ø ㅚ	ʌ ㅓ	o ㅓ
Low	æ ㅐ		ɑ ㅓ	

However, this vowel system is different from real Seoul speech in the following aspects: first, according to the SKP, the two vowels -wi¹⁶ ㅟ [y] and -oy ㅚ [ø] are monophthongs, although they can be pronounced as diphthongs. For example, the word /ø-kuk/ 외국 "foreign country" can be pronounced as either [ø-kuk] or [ue-kuk]. The word /y/ 위 "up, above" can be pronounced as either [y] or [wi]. However, in the Seoul Korean -wi ㅟ and -oy ㅚ are not monophthongs. According to Shin et al. (2012) native speakers of Seoul Korean pronounce -wi ㅟ [y] and -oy ㅚ [ø] as diphthongs. In the spectrogram for these two vowels, there is formant transition in both figures. This is also pointed out in the IPA handbook (1999:121). Second, according to SKP the two vowels [e] ㅔ and [æ] ㅐ are distinguishable. Orthographically, the word [ke] 게 "crab" and [kæ] 개 "dog" are different and it is expected that these two words should sound different. But according to many scholars' investigations native speakers can't distinguish these two sounds. Choe (2002) shows that among 210 native speakers of Seoul Korean between 20 and 80 years old, more than 80 percent of the time participants pronounced the two sounds the same. Shin et al. (2012) also shows no significant difference can be observed between [e] ㅔ and [æ] ㅐ in their formant-measures F1 and F2 in their experiment, which has ten male and

¹⁶ The Yale Romanization of Korean vowels are listed as follows: ㅣ -i, ㅟ -wi, —-u, ㅜ -wu, ㅔ -ey, ㅚ -oy, ㅓ -e, ㅓ -o, ㅐ -ay, ㅓ -a, ㅓ -ya, ㅓ -ye, ㅓ -yo, ㅓ -yu, ㅓ -yay, ㅓ -yey, ㅓ -wa, ㅓ -we, ㅓ -way, ㅓ -wey, ㅓ -uy.

ten female native speaker participants. Shin et al. (2012) concludes that there are only seven monophthongs in Seoul Korean speech, namely [i], [u], [ɯ], [ɛ], [ʌ], [o] and [ɑ].

The debate on the phonetic value of Korean monophthongs mainly concerns the following sounds. First, the transcription for mid vowel -ey ㅔ and -ay ㅐ are [e] and [ɛ] in some studies (eg. IPA handbook 1999, Lee and Ramsey 2000, Lee and Kim 2010), but mid vowel [e] and low vowel [æ] in Shin et al. (2012). Shin et al. (2012) argues that these two are not distinguishable, and they used the mid-low vowel [ɛ] to represent both of them in the phonemic inventory. Lee and Ramsey (2000:64) state that “young speakers in Seoul are seldom able to actually hear the difference. Because the two vowels are spelled differently in Hangul, most literate Koreans know which value a word is supposed to have from its spelling. But how they actually speak is something else.” Moreover, “speakers of standard Korean often cannot distinguish the English words *pet* and *pat*, *men* and *man*, *bend* and *band*.” In this study I will follow Shin et al.’s (2012) transcription. In the orthography the -ey ㅔ and -ay ㅐ are different, as shown in the Yale Romanization, in which they are written as -ey and -ay respectively. Since orthography always reflects the difference in pronunciation in earlier period, we will respect this difference and view it as the feature of the underlying form of these two vowels. In IPA both [e] and [ɛ] are mid vowels. So in order to distinguish these two vowels in our vowel chart of the Prescriptive Korean, namely SKP, we will transcribe them as mid vowel [e] and low vowel [æ] respectively. However, in the monophthong system of the Seoul Korean both -ey ㅔ and -ay ㅐ will be transcribed as [ɛ].

Second, the transcription for ㅓ is [ə] in Lee and Ramsey (2000), but [ʌ] in the IPA handbook (1999) and Shin et al. (2012). In Lee and Kim (2010), the transcription for -

e ㅓ is [ə] in the word *eon-je* 언제 "when", but [ʌ] in the word *meo-ri* 머리 "head". Since the occurrence of [ə] in the word *eon-je* 언제 "when" is in predicable context (being followed by the coda [n]), in this study I will choose [ʌ] as the transcription for mid vowel -e ㅓ in Korean.

Third, the high unrounded vowel -u — is transcribed as [i] in Lee and Ramsey (2000), but [ɯ] in the IPA handbook (1999), Lee and Kim (2010) and Shin et al. (2012). Although Lee and Ramsey (2000) transcribed -u — as [i], they claim that this sound is the unrounded equivalent of [u] (Lee and Ramsey 2000:65). In the IPA chart the unrounded equivalent of [u] should be [ɯ], so in this study I will use the symbol [ɯ] to transcribe the high unrounded vowel -u — in Korean.

Fourth, the -a ㅏ is transcribed as the central [a] in many studies (IPA handbook 1999, Lee and Ramsey 2000, Lee and Kim 2010). But it is transcribed as the back [ɑ] in Shin et al. (2012). Since there is only one /a/ in Korean, and the back [ɑ] is predictable according to the following element, I will choose the central [a] as the phoneme. Based on our discussion above, the monophthong system of the Seoul Korean can be listed as follows:

(14)

	Front		Central	Back	
	unrounded	rounded		unrounded	rounded
High	i			ɯ	u
Mid	ɛ			ʌ	o
Low			a		

2.2.2.2 Diphthongs

Diphthongs can be divided into on-glide diphthongs and off-glide diphthongs based on the order in which the glide appears. An on-glide diphthong is one in which the glide precedes the monophthong, and an off-glide is one where the glide follows the monophthong. According to SKP, there are eleven diphthongs, which are the combination of the ten monophthongs and two glides [j] and [w]. There is no off-glide diphthong in Modern Korean.

(15)

	i	ε	æ	a	ɯ	u	ʌ	o
j	-	je ㅈㅣ	jæ ㅊㅣ	ja ㅊ	ɯi ㅍㅣ	-ju ㅍ	jʌ ㅈ	jo ㅊ
w	-	we ㅌㅣ	wæ ㅍㅣ	wa ㅍ	-	-	wʌ ㅌ	-

As we mentioned above, the SKP is an idealized system of Korean pronunciation, which is slightly different from real speech. The -ey ㅈㅣ and -ay ㅊㅣ are undistinguishable in Seoul Korean, consequently, the -je ㅈㅣ is undistinguishable from -jæ ㅊㅣ and -we ㅌㅣ undistinguishable from -wæ ㅍㅣ. Moreover, the -wi ㅍㅣ and -oy ㅍ, which are considered as monophthongs in SKP, are diphthongs in Seoul Korean.

2.2.3 Korean syllable

Traditionally a Korean syllable is divided into three parts: *choseong* 初聲, which are syllable-initial consonants, *jungseong* 中聲, which corresponds to the medial and nucleus, and *Jongseong* 終聲, which corresponds to the coda position.

Choseong	Jungseong		Jongseong
Initial	Medial	Nucleus	Coda
(C)	(G)	V	(C)

The syllable structure in Korean can be summarized as (C)(G)V(C), in which only the nuclear vowel is required. Consonant clusters are not allowed in Korean. The *choseong* (initial) part can be a zero-initial or any one of the nineteen consonants.¹⁷ The *jungseong* part can be one of the ten vowels or eleven diphthongs. The coda position can be occupied by one of the seven consonants: *-p*, *-t*, *-k*, *-m*, *-n*, *-ŋ*, and *-l*. The following chart shows all the syllable types in Korean.

(16)

	IPA	Hangul	Meaning
1.V	i	이	'teeth'
2.CV	na	나	'I'
3.GV	wa	와	'and'
4.CGV	hjo	효	'filial duty'
5.VC	an	안	'inside'

¹⁷ [ŋ] cannot appear at the beginning of a word. It can appear at the beginning of a syllable only if the syllable is non-initial in a word.

6. CVC	sam	삼	‘three’
7.GVC	yak	약	‘medicine’
8.CGVC	hwal	활	‘bow’

2.2.4 Korean vowel length and pitch

There is no tone in Standard Korean. In the SKP the vowel length in some words can distinguish meaning. The macron over the vowel in the following examples indicates it is a long vowel.

(17)

mal ‘horse’ v.s. māl ‘speech’

nun ‘eye’ v.s. nūn ‘snow’

pam ‘night’ v.s. pām ‘chestnut’

Vowel length is maintained only in the first syllable of a word. If a word with a long vowel appears in non-initial position in a compound, the vowel becomes a short vowel (Lee and Ramsey 2000). In eastern dialects, the difference between the first and the second type is not reflected in vowel length, but in pitch. The first type has a higher pitch, and the second type a lower pitch (Pak 2009).

2.3 Korean government's transcription of Mandarin loanwords

In 1986 the Korean Ministry of Education announced an official document, *Oerae eo pyogibeop* 외래어 표기법 "Rules for writing foreign language words in Hangul," to regulate the transcription of foreign loanwords. The principles of transcribing loanwords

from Mandarin, as well as nineteen other foreign languages, are provided in this document.¹⁸ The basic rules proposed in this document can be summarized as below.

(18)

- a. Only the modern set of Hangul alphabet should be used.
- b. One phoneme should be represented by only one symbol.
- c. For the coda sounds, only the following alphabets are used in the orthography: ㄱ[k], ㄴ[n], ㄷ[l], ㅁ[m], ㅂ[p], ㄷ[t]¹⁹, ㅇ[ŋ].
- d. A plosive should not be represented with a tense consonant (eg. ㄱ[k*], ㄷ[t*], ㅂ[p*], ㅅ[s*], ㅈ[ts*]).
- e. Those loanword transcriptions that are already widely in use should be respected.

In addition to these general rules, there are two particular rules with regard to the transcription of Mandarin loanwords.

(19)

- a. The tone in Mandarin will not be transcribed.
- b. The Mandarin vowel [ia], [ie], [io] and [iu] are written as ㅏ[a], ㅓ[e], ㅗ[o], and ㅜ[u] when the preceding Mandarin initials are adapted in Korean as ㅈ[te], ㅉ[te*], or ㅊ[te^h].

¹⁸ This document is available on the webpage of National Institute of the Korean Language:
http://www.korean.go.kr/09_new/dic/rule/rule_foreign_index.jsp

¹⁹ The pronunciation of -s ㅅ is [s] in the initial position and [t] in the coda position.

Besides the government's transcription rule, there are some other proposals on the transcription of Mandarin loanwords in Korean. Below we will introduce the Korean government's transcription rule first and our discussion on other proposals will be provided in a later section.

2.3.1 Consonants

2.3.1.1 Plosive

The following chart lists the plosive consonants in Mandarin and Korean.

(20)

	Bilabial			Alveolar			Velar		
	voiceless unaspirated		voiceless aspirated	voiceless unaspirated		voiceless aspirated	voiceless unaspirated		voiceless aspirated
Mandarin	p		p ^h	t		t ^h	k		k ^h
	Lax	Tense		Lax	Tense		Lax	Tense	
Korean	p	p [*]	p ^h	t	t [*]	t ^h	k	k [*]	k ^h

Mandarin has two pairs of plosives, namely, voiceless unaspirated and voiceless aspirated, while Korean has three pairs of plosives, namely, lax unaspirated, tense unaspirated, and aspirated. The Mandarin voiceless aspirated [p^h], [t^h] and [k^h] are perfectly mapped into the voiceless aspirated [p^h] ≡, [t^h] ≡ and [k^h] ≡ in Korean respectively, as shown below.

(21)

Pinyin	IPA	Character	Hangul	IPA
--------	-----	-----------	--------	-----

pu3er3cha2 ²⁰	p ^h u. əɾ. ts ^h a ²¹	普洱茶	푸얼차	p ^h u.ʌl.tɕ ^h a
mao2tai2ju3	mau.t ^h ai. tɕjəu	茅臺酒	마오타이주	ma.o. t ^h a. i. tɕu
kong3fu3jia1jiu3	k ^h uŋ. fu. tɕia. tɕjəu	孔府家酒	쿵푸자주	k ^h uŋ.p ^h u. tɕa. tɕu

However, the transcription of Mandarin voiceless unaspirated -b[p], -d[t], -g[k] poses a challenge to scholars. In Chinese there is only one series of voiceless unaspirated, while in Korean there are two series, namely lax voiceless ㅍ[p], ㅌ[t], ㅋ[k] and tense voiceless ㅍ*[p*], ㅌ*[t*], ㅋ*[k*]. The difference between these two types lies in the following points. Kim and Duanmu (2004) summarize the phonetic difference between tense and lax stops in the initial position, which is quoted as follows.

(22)

Feature	Tense	Lax
Following tone	higher	lower
VOT	shorter	longer
Glottal opening	narrower	wider
H1-H2 (breathiness)	smaller	larger
Intensity	strong	weak
Voicing duration	shorter	longer
Airflow at release	smaller	greater
Air pressure before release	greater	smaller

²⁰ The number 1, 2, 3 and 4 refer to Tone 1, Tone 2, Tone 3 and Tone 4 in Mandarin respectively.

²¹ For simplicity tone notation is not included in the transcription.

Both the Mandarin -b[p], -d[t], -g[k] and the Korean ㅂ[p], ㄷ[t], ㄱ[k] are transcribed as [p, t, k] in the IPA. However, the Mandarin -b[p] is in fact different from the Korean ㅂ[p] in terms of perception. Many studies show that the Mandarin -b[p], -d[t], -g[k] is perceived to be much closer to the Korean tense stops [p*], [t*] and [k*] than the lax consonants ㅂ[p], ㄷ[t] and ㄱ[k] (Eom 2000, Maeng and Kwon 2007). Despite the perception similarity with Korean tense stops, the Mandarin -b[p], -d[t], -g[k] is adapted as Korean lax stops ㅂ[p], ㄷ[t], ㄱ[k] in the Korean government's transcription.

(23)

Pinyin	IPA	Character	Hangul	IPA
bei3jing1	pe i.tɕiŋ	北京	베이징	pe .i. tɕiŋ
da4lian2	ta .liɛn	大連	다롄	ta .liɛn
gan1su4	kan .su	甘肅	간쑤	kan .s* u

2.3.1.2 Fricative

The following table compares the fricatives in Mandarin and Korean.

(24)

	Labio-dental	Dental	Alveolar		Retroflex	Alveo-palatal	Velar	Glottal
Mandarin	f		s		ʂ	ɕ	x	
Korean			lax	tense				
			s	s*				h

The labio-dental [f] sound in Mandarin does not have any corresponding sound in Korean. The Korean bilabial aspirated [p^h] is used to transcribe the Mandarin [f] in the government's transcription.

(25)

Pinyin	IPA	Character	Hangul	IPA
fu2jian4	f u.tejɛn	福建	푸젠	p ^h u. tɛɛn

Similar adaptation is also seen in the English loanwords in Korean. The English voiceless fricative [f] always corresponds to the [p^h] in Korean, as exemplified below.

(26)

English	Hangul	IPA
film	필름	[p ^h il.lum]
foundation	파운데이션	[p ^h a. un. tɛ. i. sjʌn] ²²
coffee	커피	[k ^h ʌ.p ^h i]
muffler	머플러	[mʌ. p ^h ʉl. lʌ]

The Mandarin fricatives -s[s] and -sh[ʃ] are represented as ㅅ[s*] and ㅅ[ʃ] respectively in Korean in the government's transcription.

(27)

Pinyin	IPA	Character	Hangul	IPA
si4chuan1	sɿ.tɕ ^h wan	四川	쓰촨	s*ʉ.tɕ ^h wan

²² 'foundation' is also adapted as [hwa. un. tɛ. i. sjʌn] in Korean.

shang4hai3	ʂaŋ.xai	上海	상하이	saŋ. ha. i
------------	---------	----	-----	------------

The Mandarin fricative -s[s] and Korean lax fricative -s ㅅ are both written as [s] in IPA. However, In terms of perception the retroflex fricative, -sh[ʂ] sounds more like the Korean lax fricative [s]ㅅ, while the Mandarin -s [s] sounds more like the Korean tense [s*]ㅅ* (Eom 2005). The transcription of Mandarin fricative -s[s] and -sh[ʂ] shows that perception plays a crucial role in the adaptation. The Mandarin alveo-palatal fricative -x[ç] corresponds to the lax fricative ㅅ[s] in Korean.

(28)

Pinyin	IPA	Character	Hangul	IPA
xia4men2	ɕja. mən	廈門	샤먼	ɕja. mən
xin1jiang1	ɕin. tɕjaŋ	新疆	신장	ɕin. tɕaŋ

According to Shin et al. (2012), the fricatives [s] and [s*] in Korean have the following allophones.

(29)

Phoneme	Major allophones	Environment
s	ɕ	before /j, i, wi/
	s	before all other vowels
s*	ɕ*	before /j, i/
	s*	before all other vowels

Since the ㅅ[s] in Korean becomes [ɕ] when it is followed by [i] or [j], in this sense the [ɕ] in Mandarin is faithfully mapped into Korean. The Mandarin velar fricative [x] is adapted as the glottal fricative [h] ㅎ in Korean.

(30)

Pinyin	IPA	Character	Hangul	IPA
hai3er3	ɣai.ər	海爾	하이얼	ha. i. ʌl

2.3.1.3 The affricates

The following chart lists the affricates in Mandarin and Korean. Mandarin has three types of affricates, while Korean has only one type, namely palatal affricates.

(31)

	Dental-alveolar		Retroflex		Palatal	
	unaspirated	aspirated	unaspirated	aspirated	unaspirated	aspirated
Mandarin	ts	ts ^h	tʂ	tʂ ^h	tɕ	tɕ ^h
Korean					lax	tense
					tɕ	tɕ*
						aspirated
						tɕ ^h

All the three Mandarin aspirated affricates, regardless of their place of articulation, are represented as [tɕ^h], the only aspirated affricate in Korean.

(32)

Pinyin	IPA	Character	Hangul	IPA
cang1zhou1	ts ^h ɑŋ. tʂou	滄州	창저우	ts ^h ɑŋ. tɕʌ.u

chang2sha1	tʂʰaŋ. ʂa	長沙	창사	tɕʰaŋ. ɕa
qing1dao3	tɕʰiŋ. tau	青島	칭다오	tɕʰiŋ. ta.o

The Mandarin palatal unaspirated affricate [tɕ] is represented as the lax affricate [tɕ] in Korean, which is also a palatal sound.

(33)

Pinyin	IPA	Character	Hangul	IPA
ji3nan2	tɕi.nan	濟南	지난	tɕi. nan

The Mandarin retroflex affricate -zh [tʂ] and Dental-alveolar affricate -z [ts] are represented as lax affricate [tɕ] and tense affricate [tɕ*] respectively in Korean.

(34)

Pinyin	IPA	Character	Hangul	IPA
zi1bo2	tʂɿ.po	淄博	쯔보	tɕ*ʉ.po
zhang1jia1jie4	tʂaŋ. tɕja. tɕje	張家界	장자제	tɕaŋ.tɕa. tɕe

As we mentioned above, in terms of perception, the Mandarin retroflex fricative -sh[ʂ] is close to the Korean lax fricative [s] ㅅ, while the Mandarin -s[s] sounds more like the Korean tense fricative [s*] ㅆ. Similarly, the Mandarin -zh [tʂ] sounds more like the Korean lax affricate [tɕ] while the Mandarin -z[ts] sounds more like the Korean tense affricate [tɕ*]. The government's transcription shows that perception plays a crucial role in the adaptation of the Mandarin affricative -zh [tʂ] and -z [ts].

2.3.1. 4 Approximant

The following chart lists the approximants in Mandarin and Korean. Mandarin retroflex [ɭ] is not found in the approximant inventory of Korean.

(35)

	Bilabial	Alveolar	Retroflex	Palatal
Mandarin		l	ɭ	
Korean		l		

The two Mandarin approximants, l[l] and r[ɭ] are both represented as [l], the only approximant in Korean.

(36)

Pinyin	IPA	Character	Hangul	IPA
ge2li4	kɤ.li	格力	거리	kʌ.li
tong2ren2tang2	tʰuŋ.ɻən.tʰaŋ	同仁堂	통런탕	tʰuŋ.lʌn.tʰaŋ

2.3.1.5 Nasal

The following chart lists the nasals in Mandarin and Korean.

(37)

	Bilabial	Alveolar	Velar
Mandarin	m	n	ŋ
Korean	m	n	ŋ

The Mandarin [m] and [n] correspond to [m] and [n] in Korean respectively. The [ŋ] cannot appear in the initial position in both Mandarin and Korean. The Mandarin [ŋ] in the coda position is represented as [ŋ] in Korean.

(38)

Pinyin	IPA	Character	Hangul	IPA
mu3dan1jiang1	mu.tan.tejaŋ	牡丹江	무단장	mu.tan.teaŋ
nan2jing1	nan. tciŋ	南京	난징	nan.tciŋ

2.3.1.6 Summary

Based on our above discussion, the following chart lists the adaptation of Mandarin consonants into Korean.

(39)

		Pinyin	Mandarin consonants (IPA)	Korean consonants (IPA&Hangul)
stop	voiceless unaspirated	b	p	p ㅍ
		d	t	t ㅌ
		g	k	k ㄱ
	voiceless aspirated	p	p ^h	p ^h ㅍ
		t	t ^h	t ^h ㅌ
		k	k ^h	k ^h ㅋ
Fricative		f	f	p ^h ㅍ

		s	s	s* ㄱ
		sh	ʃ	s ㄴ
		x	ɕ	s ㄴ
		h	x	h ㅎ
Affricative	Dental-alveolar	z	ts	tɕ* ㄷ
		c	tsʰ	tɕʰ ㅌ
	retroflex	zh	tʂ	tɕ ㅈ
		ch	tʂʰ	tɕʰ ㅊ
	palatal	j	tɕ	tɕ ㅈ
		q	tɕʰ	tɕʰ ㅊ
Nasal	bilabial	m	m	m ㅁ
	dental-alveolar	n	n	n ㄴ
	velar	ŋ	ŋ	ŋ ㅇ
Approximant		r	ɻ	l ㄹ
Lateral		l	l	l ㄹ

2.3.2 Vowels

2.3.2.1 High vowel

The following chart lists the high vowels in Mandarin and Korean.

(40)

		Front		central	Back	
		unrounded	rounded		unrounded	rounded
High	Mandarin	i, ɿ	y		ɯ	u
	Korean	i ɿ	y ɥ		u ㅡ	u ㅜ

The high vowel [i] and [u] exist in both Mandarin and Korean, so a perfect mapping is seen in these two vowels. According to the SKP, the Mandarin high vowel [y] has a corresponding phoneme [y] 위 in Korean. However, as mentioned above, in the real speech, the vowel [y] 위 is always a diphthong. Despite this, Mandarin high vowel [y] is adapted as Korean [y] 위 in the government's transcription.

(41)

Pinyin	IPA	Character	Hangul	IPA
yi4wu1	i.u	義烏	이우	i.u
yu4shu4	y.ɕu	玉樹	위수	y.su

The Mandarin [ɿ] and [ʅ] are not seen in the vowel inventory of Korean. The Korean [u], an unrounded back vowel, is used to represent both [ɿ] and [ʅ].

(42)

Pinyin	IPA	Character	Hangul	IPA
zi1bo2	tsɿ.po	淄博	즈보	te* u .po
chang2zhi4	tɕʰaŋ.tɕʰɿ	長治	창즈	te ^h aŋ.te u

2.3.2.2 Mid vowel

The following chart lists the mid vowels in Mandarin and Korean.

(43)

		Front		central	Back	
		unrounded	rounded		unrounded	rounded
Mid	Mandarin	ɛ e		ə	ɤ	o
	Korean	e ㅔ æ ㅐ	ø ㅚ		ʌ ㅓ	o ㅜ

The mid vowel [e] and the vowel [o] exist in both Mandarin and Korean, so there is a perfect match in these vowels.

(44)

Pinyin	IPA	Character	Hangul	IPA
hei2long2jiang1	xei. luŋ. tɕjaŋ	黑龍江	헤이룽장	he.i. luŋ.tɕaŋ
zi1bo2	tsɿ.pɔ	淄博	쯔보	tɕ*ʉ.pɔ

The Mandarin vowel [ɛ] is represented as [e] in Korean, as shown below.

(45)

Pinyin	IPA	Character	Hangul	IPA
tian1jin1	tʰjɛn. tein	天津	텐진	tʰjɛn. tein

The Mandarin vowel [ə] and [ɤ] are both represented as [ʌ], a back vowel in Korean.

(46)

Pinyin	IPA	Character	Hangul	IPA
xia4men2	ɕja. mən	廈門	샤먼	ɕja. mən
ge2li4	kɤ.li	格力	거리	kʌ.li

2.3.2.3 Low vowel

The following chart lists the low vowel in Mandarin and Korean.

(47)

		Front		central	Back	
		unrounded	rounded		unrounded	rounded
Low	Mandarin			a		
	Korean			a ㅏ		

As shown in this chart, the [a] vowel exists in both Mandarin and Korean. The Mandarin vowel [a] is faithfully adapted into Korean [a].

(48)

Pinyin	IPA	Character	Hangul	IPA
zhang1jia1jie4	tʃaŋ. tɕja. tɕje	張家界	장자제	tʃaŋ.tɕa. tɕe

2.3.2.4 Summary

Based on our above discussion, the following chart lists the adaptation of the Mandarin vowels into Korean.

(49)

Pinyin	Mandarin vowel (IPA)	Korean vowel (IPA)
i	i	i
ü	y	y
i	ɿ	ɯ
i	ʅ	ɯ
u	u	u
e	ɤ	ʌ
e	e	e
e	ə	ʌ
o	o	o
a	a	a

2.3.3 Syllable structure

The structure of a Mandarin syllable is (C)(G)(V)(C/V), while the structure of a Korean syllable is (C)(G)V(C). The following syllable types in Mandarin are mapped into one syllable in Korean in the government's transcription.

(50)

	Pinyin	IPA	Character	Meaning	Korean Transcription	IPA
V	è	[ɤ]51	餓	hungry	어	ʌ
CV	mǎ	[ma]214	馬	horse	마	ma

GV	yā	[ja]55	鴨	duck	야	ja
CGV	duō	[two]55	多	many	뒤	twΛ
VC	ān	[an]55	安	peace, safe	안	an
CVC	lái	[lan]35	藍	blue	란	lan
GVC	yán	[jen]35	鹽	salt	옌	jen
CGVC	huàn	[xwan]51	換	to exchange	환	hwan

However, the Mandarin (V) at the end of a diphthong, which is not allowed in a Korean syllable, is represented as an independent syllable.

(51)

	Pinyin	IPA	Character	Meaning	Korean Transcription	IPA
VV	ǎi	[ai]51	愛	love	아이	a.i
CVV	lái	[lai]35	來	come	라이	la.i
GVV	yào	[jau]51	藥	medicine	야오	ja.o
CGVV	huài	[xwai]51	壞	bad	화이	hwa.i

According to the Korean government's transcription, the [j] glide in Mandarin is dropped in the Korean representation when the preceding Mandarin initials are adapted in Korean as ㄷ [tɕ], ㄸ [tɕ*], or ㅌ [tɕʰ].

(52)

Pinyin	IPA	Character	Hangul	IPA
zhang1jia1jie4	tʂaŋ. tɕja. tɕje	張家界	장자제	teaŋ.tɕa. tɕe
qiong2lai2	tɕʰjuŋ. lai	邛崃	충라이	tɕʰuŋ. la. i

In addition, the Mandarin -iu, -ui and -un are phonetically [jou], [wei] and [wən], although the nucleus is not spelled out in pinyin. Influenced by the pinyin spelling, the nucleus of Mandarin -ui [wei] and -un [wən] is dropped in the Korean representation.

(53)

Pinyin	IPA	Character	Hangul	IPA
an1hui1	an.xwei	安徽	안후이	an. hu. i
chang2chun1	tɕʰaŋ.tɕʰwən	長春	창춘	tɕʰaŋ. tɕʰun

As for the Mandarin final -iu[jou] there are two types of representations in Korean. First, when the initial is not -j[tɕ] or -q[tɕʰ], the nucleus in the -iu[jou] is dropped in the Korean representation.

(54)

Pinyin	IPA	Character	Hangul	IPA
liu2yang2	liju. jaŋ	瀏陽	류양	lju.jaŋ

Second, when the initial is -j[tɕ] or -q[tɕʰ], both the glide and the nucleus in the -iu[jou] are dropped.

(55)

Pinyin	IPA	Character	Hangul	IPA
jiu3jiang1	te ^j ou.tejaŋ	九江	주장	te ^u .teaŋ
shang1qiu1	saŋ.te ^h ju	商丘	상추	saŋ. te ^h u

2.3.4 Tones

According to the Korean government's transcription, Mandarin tones are not transcribed into Korean, as shown below.

(56)

Pinyin	IPA	Character	Hangul	IPA
wu2xi1	u.ɕi	无锡	우시	u.si
wu1xi1	u.ɕi	巫溪	우시	u.si

2.3.5 Adaptation strategies

When a form in the source language cannot find the perfect match in the target language, an adjustment will be made. There are two types of adjustments. The first type is faithful adjustment, which includes epenthesis, resyllabification and replacement. The second type is unfaithful adjustment, namely deletion. What element can be added, deleted or replaced is not a random selection. Epenthesis is not seen in the Mandarin loanwords in Korean, so we will not discuss it in this section.

2.3.5.1 Resyllabification

In order to maximally preserve the input form in the source language the resyllabification strategy is adopted in Mandarin loanwords in Korean when there is mismatch in the syllable structure.

(57)

	Pinyin	IPA	Character	Meaning	Korean Transcription	IPA
VV	ǎi	[ai]51	愛	love	아이	a.i
CVV	lái	[lai]35	來	come	라이	la.i
GVV	yào	[jau]51	藥	medicine	야오	ja.o
CGVV	huǎi	[xwai]51	壞	bad	화이	hwa.i

Because of the constraint on Korean syllable structure, the Mandarin [i]/[u] at the end of a diphthong is adapted as an independent syllable.

2.3.5.2 Replacement

The inputs that do not exist in the target language will be replaced by the most similar element in the process of adaptation. However, which level of similarity is used to match the sounds is a question. The Mandarin loanwords in Korean show that the similarity of the perception level, rather than the phonemic level, plays a crucial role in the adaptation. For example, the underlying phoneme of Mandarin mid-vowel is [ə], which has the allophones [e], [ɤ] and [o] in different phonetic environments.

(58)

[ə] before consonants

[e] in a diphthong followed by [i] or in syllable final position preceded by [j]/[ɥ]

[o] in a diphthong followed by [u] or in syllable final position preceded by [w]

[ɤ] in syllable final position in a CV syllable.

As shown below, the adaptation of Mandarin mid-vowel is not based on the underlying phoneme, but the surface form.

(59)

Pinyin	IPA	Character	Hangul	IPA
hei2long2jiang1	x _{ei} . luŋ. tɕjaŋ	黑龍江	헤이룽장	h _e .i. luŋ.tɕaŋ
zi1bo2	tsɿ.p _o	淄博	쯔보	tɕ* _u .p _o
xia4men2	ɕja. mən	廈門	샤먼	ɕja. mən
ge2li4	k _ɤ .li	格力	거리	k _ʌ .li

The adaptation of Mandarin mid-vowels shows that the adapted form tends to maximize the perceptual similarity to the source input within the phonological inventory of the borrower's language.

2.3.5.3 Deletion

Tone does not exist in Korean phonological system, plus no similar super-segmental feature in Korean is available for the adaptation of the Mandarin tones. Therefore, the deletion strategy is adopted in the government's transcription.

(60)

Pinyin	IPA	Character	Hangul	IPA
wu2xi1	u.ɕi	无锡	우시	u.si
wu1xi1	u.ɕi	巫溪	우시	u.si

2.4 Other proposals on the transcription of Mandarin loanwords

2.4.1 Choe-Kim (1985)

One year before the announcement of Korean government's transcription, Choe and Kim (1985) raised their proposal for the transcription of Mandarin loanwords. The primary feature of Choe-Kim's (1985) proposal is that it aims to keep the distinction of every Mandarin phoneme. For these Mandarin phonemes that Korean has no corresponding sounds, Choe-Kim (1995) proposed to add another symbol to distinguish them. For example, Mandarin [h] is transcribed as [h], and Mandarin [f], which has no corresponding sound in Korean, is transcribed as [hw]. Mandarin [l] is transcribed as [l], and Mandarin [ɿ], a sound not seen in Korean, is transcribed as [lu]. In order to keep the distinctiveness in the source form, Choe-Kim's (1995) proposal sacrificed the faithfulness to the original sound. This is different from the normal loanword borrowing process, the goal of which is pursuing closeness to the original form within the phonemic inventory of the borrowing language.

2.4.2 Eom (1996, 2002a, 2002b)

Eom (1996, 2002a, 2002b) proposed a series of revisions to the government's transcription rule. The introduction to Eom's transcription given here will be based on the final version in Eom (2002b). Below is a summary of the difference between the Korean government's transcription and Eom's (2002b) transcription.²³

2.4.2.1 Consonant

²³ Other proposals that have been raised include Shim(1999), Tsen(1999), Im(2000), Maeng(2000), Y. Kim (2003), T. Kim(2000), T. Wen (2001), T. Pai (2002), H. Tsang (2003), W. Tsong (2007a, 2007b) and A. Shin (2008), etc. In this study we will restrict our discussion to Choe-Kim (1985) and Eom (1996,2002a,2002b).

(61)

	Mandarin		Government		Eom	
	Pinyin	IPA	Hangul	IPA	Hangul	IPA
voiceless unaspirated stop	b	p	ㅂ	p	ㅃ	p*
	d	t	ㄷ	t	ㄸ	t*
	g	k	ㄱ	k	ㄲ	k*

As mentioned in section 2.3.1, although the Mandarin -b[p], -d[t], -g[k] and the Korean ㅂ[p], ㄷ[t], ㄱ[k] are both transcribed as [p, t, k] in the IPA, many studies show that the Mandarin -b[p], -d[t], and -g[k] is perceived to be much closer to the Korean tense stops [p*], [t*] and [k*] than the lax consonants ㅂ[p], ㄷ[t], and ㄱ[k] (Eom 2000:48, Maeng and Kwon 2007). Therefore, Mandarin -b[p], -d[t], and -g[k], which are transcribed as Korean lax stops ㅂ[p], ㄷ[t], and ㄱ[k] in the government's transliteration rule, are transcribed as Korean tense stops [p*], [t*] and [k*] in Eom (2002b) based on perception similarity.

2.4.2. 2 Vowel

2.4.2.2.1 Mono-vowel

(62)

Mandarin		Government		Eom	
Pinyin	IPA	Hangul	IPA	Hangul	IPA
ian	iɛn	옌	ien	옌	iæɲ
juan	tɕɥɛn	쥘안	tɕy. an	쥘옌	tɕy. æɲ
quan	tɕʰɥɛn	쥘안	tɕʰy. an	쥘옌	tɕʰy. æɲ

xuan	ɕɥɛn	취안	sy. an	취앤	sy. æn
yuan	ɥɛn	위안	y.an	위앤	y. æn
ong	ʊŋ	웅	uŋ	웅	oŋ
ou	ou	어우	ʌ.u	오우	o.u
uo	wo	위	wʌ	우오	u.o

The reason for transcribing Mandarin -ian [iɛn] as [iæ̃n], according to Eom (2002b:55), is that "Korean [æ̃] sounds more close to the Mandarin vowel [ɛ̃] than Korean [e]." The government's transcription of Mandarin -uan [ɥɛn] is [y.an]. In fact the nuclear vowel in Mandarin -uan is [ɛ̃] in real speech although the pinyin form is -a. The transcription in the government's form is affected by the pinyin spelling. Eom's (2002b) transcription changes the government's [y. an] into [y.æ̃n]. The -o in -ong, which is transcribed as [u] in the government's rule, is transcribed as [o] in Eom (2002b). The reason of this, according to Eom (2002b:87), is "to be consistent with the pinyin spelling". It is noteworthy that Eom (1996) proposes to transcribe Mandarin -ong as [uŋ], arguing that the source form [ʊŋ] is more close to Korean [uŋ] in term of perception. The reason for this change, according to Eom (2002b:87), is that "the principle of convenience (being able to give a transcription directly based on pinyin) is placed, in this study, superior to the principle of faithfulness to the source form." Mandarin -ou, which is represented as [ʌ.u] in the government's transcription, is represented as [o.u] in Eom (2002b) because of the faithfulness to the source form (Eom 2002b:69) and the convenience of giving a transcription directly based on pinyin (Eom 2002b:88). Mandarin -uo, which is represented as [wʌ] in the government's transcription, is transcribed as [o] in Eom (200b) in order to be faithful to the source form (Eom 2002b: 70).

2.4.2.2.2 Glide

(63)

Mandarin		Government		Eom	
Pinyin	IPA	Hangul	IPA	Hangul	IPA
jiao	tɕjau	자오	tɕa.o	자오	tɕja.o
qiao	tɕ ^h jau	차오	tɕ ^h a.o	차오	tɕ ^h ja.o
jia	tɕja	자	tɕa	지아	tɕi.a
qia	tɕ ^h ia	차	tɕ ^h a	치아	tɕ ^h i.a
jie	tɕje	제	tɕe	지에	tɕi.e
qie	tɕ ^h je	체	tɕ ^h e	치에	tɕ ^h i.e

The [j] glide after Mandarin -j [tɕ], -q [tɕ^h], which is dropped in the government's transcription, is preserved in Eom (2002b). It should be noted that in the government's transcription the [j] after Mandarin -x[ɕ] is preserved, as shown below.

(64)

Mandarin		Government		Eom	
pinyin	IPA	Hangul	IPA	Hangul	IPA
xia	ɕja	샤	sja	시아	si.a
xiao	ɕjau	샤오	sja.o	샤오	sja.o
xie	ɕje	셰	sje	시에	si.e

The maker of the government's transcription believes that the [j] glide after the [tɕ] and [tɕ^h] is not necessary since [tɕ] and [tɕ^h] are palatalized initials. On the contrary, [j] glide is still written out in Eom's transcription. This shows scholars' different opinions toward native language's phonological system.

2.4.2.3 Syllable number

Mandarin diphthongs, except -ai, -ei, -ao and -ou, are represented as one syllable in the government's transcription. However, all the diphthongs are represented as two syllables in Eom (2002b). Eom (2002b) states that "Mandarin diphthongs -ai, -ei, -ao and -ou are inevitably been represented as two syllables due to the phonotactic constraints in Korean. Therefore, in order to keep the consistency, all the diphthongs in Mandarin will be transcribed with two syllables." Eom (2002b) also states that "the government's transcription include many syllable types which are only seen in onomatopes, such as, [twan] 뚱, [tɕ^hwan] 좡, etc. These syllable types can be avoided by adopting the strategy of resyllabification." Below is a list of different transcriptions in the government's rule and Eom (2002b) in terms of syllable number.

(65)

Mandarin		Government		Eom	
pinyin	IPA	Hangul	IPA	Hangul	IPA
dia	tja	다	tja	띠아	t [*] i.a
jia	tɕja	자	tɕa	지아	tɕei.a
lia	lja	라	lja	리아	li.a
qia	tɕ ^h ja	차	tɕ ^h a	치아	tɕ ^h i.a
xia	ɕja	샤	sja	시아	si.a
bie	pje	베	pje	뻬에	p [*] i.e
die	tje	데	tje	띠에	t [*] i. e
jie	tɕje	제	tɕe	지에	tɕei.e
lie	lje	레	lje	리에	li.e
nie	nje	네	nje	니에	ni.e

mie	mje	메	mje	미에	mi.e
pie	p ^h je	페	p ^h je	피에	p ^h i.e
qie	tɕ ^h je	체	tɕ ^h e	치에	tɕ ^h i.e
tie	t ^h je	테	t ^h je	티에	t ^h i.e
xie	ɕje	세	sje	시에	si.e
gua	kwa	과	kwa	꾸아	k*u.a
hua	xwa	화	hwa	후아	hu.a
kua	k ^h wa	과	k ^h wa	쿠아	k ^h u.a
shua	ɕwa	좌	swa	수아	su.a
zhua	tɕwa	좌	tswa	주아	tɕu.a
chuo	tɕ ^h wo	취	tɕ ^h wΛ	추오	tɕ ^h u.o
cuo	ts ^h wo	취	tɕ ^h wΛ	추오	tɕ ^h u.o
duo	two	뒤	twΛ	뚜오	t*u.o
guo	kwo	귀	kwΛ	꾸오	k*u.o
huo	xwo	휘	hwΛ	후오	hu.o
kuo	k ^h wo	귀	k ^h wΛ	쿠오	k ^h u.o
luo	lwo	뤼	lwΛ	루오	lu.o
nuo	nwo	누	nwΛ	누오	nu.o
ruo	.lwo	뤼	lwΛ	루오	lu.o
shuo	ɕwo	쉬	swΛ	수오	su.o
suo	swο	썬	s*wΛ	쑤오	s*u.o
tuo	t ^h wo	튀	t ^h wΛ	투오	t ^h u.o
zhuo	tɕwo	줘	tɕwΛ	주오	tɕu.o
zuo	tswο	쥬	tɕ*wΛ	쑤오	tɕ*u.o
jue	tɕɕe	쥬	tɕwe	쥬에	tɕɕy.e
l üe	lɕe	뤼	lwe	뤼에	ly.e
n üe	nɕe	녜	nwe	녜에	ny.e

que	te ^h ɥe	취	te ^h we	취에	te ^h y.e
xue	ɕ ^h ɥe	췌	swe	쉬에	sy.e
yue	ɥe	웨	we	위에	y.e
bian	pjen	벤	pjen	뻬앤	p*i.æn
dian	tjen	덴	tjen	띠앤	t*i.æn
jian	tejen	젠	tɛen	지앤	tei.æn
lian	ljen	렌	ljen	리앤	li.æn
mian	mjen	멘	mjen	미앤	mi.æn
pian	p ^h jen	펜	p ^h jen	피앤	p ^h i.æn
qian	te ^h jɛn	첸	te ^h en	치앤	te ^h i.æn
tian	t ^h jɛn	텐	t ^h jen	티앤	t ^h i.æn
xian	ɕjen	셴	sjen	시앤	si.æn
jiang	tejaŋ	장	teɑŋ	지앙	tei.aŋ
liang	ljaŋ	량	ljaŋ	리앙	li.aŋ
qiang	te ^h jaŋ	창	te ^h aŋ	치앙	te ^h i.aŋ
xiang	ɕjaŋ	샹	sjaŋ	시앙	si.aŋ
jiong	tejoŋ	중	teuŋ	지옹	tei.oŋ
qiong	te ^h joŋ	충	te ^h uŋ	치옹	te ^h i.oŋ
xiong	ɕjoŋ	슝	siuŋ	시옹	si.oŋ
chuan	tɕ ^h wan	촨	te ^h wan	추안	te ^h u.an
duan	twan	뛼	twan	뚜안	t*u.an
cuan	ts ^h wan	촨	te ^h wan	추안	te ^h u.an
guan	kwan	관	kwan	꾸안	k*u.an
huan	xwan	환	hwan	후안	hu.an
kuan	k ^h wan	관	k ^h wan	쿠안	k ^h u.an
luan	lwan	롄	lwan	루안	lu.an
nuan	nwan	난	nwan	누안	nu.an

ruan	.ɾwan	완	lwan	루안	lu.an
shuan	ɕwan	완	swan	수안	su.an
suan	swan	썬	s*wan	쑤안	s*u.an
tuan	t ^h wan	툐	t ^h wan	투안	t ^h u.an
zhuan	tɕwan	완	tewan	주안	tɕu.an
zuan	tswan	썬	te*wan	쑤안	te*u.an
chuang	tɕ ^h wan	창	te ^h wan	추앙	te ^h u.aŋ
guang	kwan	광	kwan	꾸앙	k*u.aŋ
huang	xwan	황	hwan	우앙	u.aŋ
kuang	k ^h wan	광	k ^h wan	쿠앙	k ^h u.aŋ
shuang	ɕwan	쌍	swan	수앙	su.aŋ
zhuang	tɕwan	쌍	tewan	주앙	tɕu.aŋ

2.4.2.4 -iu, -ui and -un

The pinyin -iu is in fact [iou] phonetically although the [o] is not written out in the pinyin spelling. The Mandarin -iu [iou] is transcribed as [iu] in the government's transcription, with the vowel [o] not transcribed. On the contrary, the nuclear vowel [o] in -iu is transcribed as [o] in Eom's (2002b) transcription.

(66)

Mandarin		Government		Eom	
Pinyin	IPA	Hangul	IPA	Hangul	IPA
you	jou	유	ju	요우	jo.u

In the following syllables that include [iu], the [o] in both government's transcription and Eom's (2002b) transcription are omitted.

(67)

Mandarin		Government		Eom	
Pinyin	IPA	Hangul	IPA	Hangul	IPA
diu	tjou	듀	tju	띠우	t*i.u
jiu	tejou	주	teu	지우	tei.u
liu	ljou	류	lju	리우	li.u
miu	mjou	뮤	mju	미우	mi.u
niu	njou	뉴	nju	니우	ni.u
qiu	te ^h jou	추	te ^h u	치우	te ^h i.u
xiu	ɕjou	슈	sju	시우	si.u

The nucleus of -ui and -un, which are phonetically [uei] and [uən], are not seen in either the government nor Eom's (2002b) transcription.

(68)

Mandarin		Government		Eom	
Pinyin	IPA	Hangul	IPA	Hangul	IPA
dui	twəi	두이	tu.i	뚜이	t*u.i
dun	twən	둔	tun	똥	t*un

The different strategies adopted in the government's transcription and Eom's (2002b) transcription provides important insights to the process of loanword adaptation. Previous studies in loanword phonology have proposed different proposals on the strategy of adaptation. The following section is a brief summary of these proposals, followed by our reflection based on Mandarin loanwords in Korean.

2.5 Loanword phonology

Loanword phonology is a subfield of phonology which investigates the mapping between two phonological systems in the process of borrowing. Loanwords show the conflicts between the sound systems of two languages. On the one hand, loanwords preserve a source language as much as possible; on the other hand, they have to conform to the target language's phonological system. How the adaptation of loanwords from a language to the target language is the central issue in loanword phonology. The main questions that discussed in loanword phonology are listed as follows:

First, what is the input form in the adaptation? Is it the acoustical form that is perceived by the borrower, the phonological form that is filtered according to the phonological constraints in the target language or the form reflected in the orthography of the source language? Second, how is the input adapted to fit the phonological system in the target language? Those sounds or phonological structures that are not available in the target language will be borrowed as the most faithful form. Then what is the interaction between the well-formedness restriction of the target language and the maximal preservation of the input form?

Scholars have proposed different views on how the patterns of adaptation should be interpreted. The major theory of loanword phonology can be divided into three approaches: the perception approach, the phonology approach, and the phonetics-phonology approach.

2.5.1 The perception approach

The perception approach claims that the perception of the borrower determines the result of borrowing in the loanword adaptation (eg. Dupoux et al. 1999, Peperkamp 2005,

Peperkamp and Dupoux 2003, Vendelin and Peperkamp 2004, Peperkamp, Vendelin and Nakamura 2008). These scholars claim that the borrower does not access the phonology of the source language, and the inputs of loanwords are on the level of surface forms.

Dupoux et al. (1999) reports that when native speakers of Japanese are presented with the form [ebzo], they report that what they hear is [ebuuzo] in most cases. Moreover, Japanese participants have severe difficulties to distinguish between [ebzo] and [ebuuzo] in discrimination tasks. Peperkamp and Dupoux (2003) compared loanword adaptations to experimental speech perception data and found many correspondences. For example, Korean listeners find it hard to distinguish [ɹ] and [l], and in loanwords originating from English, word-initial -l is adapted as [r] in Korean. French listeners have difficulties in perceiving stress contrasts, and in loanwords stress is always on word final, regardless of the stress position in the source form. Peperkamp and Dupoux (2003:367) propose that "loanword adaptation take place in perception and are defined as phonetically minimal transformations."

Peperkamp (2005) points out the conflicts between native phonological alternation and loanword adaptations as well as the "unnecessary" adaptation are highly problematic for analyses that derive adaptations within the phonological grammar of the borrowing language. For example, [s] is not allowed in syllable coda in the native Korean phonology. An underlying /s/ is realized as [t] when it occurs in coda position (eg. 맛 "taste" /mas/→[mat]), but in loanwords, word with [s] in coda position will undergo epenthesis. Also in Korean, loanwords from English with a voiceless stop coda are often adapted with an aspirated stop followed by an epenthetic vowel, especially when the preceding vowel is tense, such as *bat* >[pæ.t^hu], *deck*>[tɛ.k^hu], *hip*>[hi.p^h]. These adapted forms

are unexpected, since the voiceless stop coda can appear in the coda position in native Korean phonology, such as [pat] "field", [kæk] "guest", [tɕip] "house". Peperkamp (2005:10) concludes that these two phenomena can be explained "under the hypothesis that loanword adaptations are basically phonetic rather than phonological in nature."

Vendelin and Peperkamp (2004) points out that in Japanese loanwords, word-final [n] is adapted as a moraic nasal consonant in loanwords from English, while as a geminate nasal followed by an epenthetic vowel in loanwords from French. In order to explain this phenomenon, Vendelin and Peperkamp (2004) conducted a forced choice task experiment and found that Japanese listeners perceived epenthetic vowels significantly more often in stimuli produced by French speakers than that produced by American English speakers. Peperkamp, Vendelin and Nakamura (2008) also examined the different adaptation of word-final [n] in Japanese loanwords from English and French through experiment and found that French word-final [n] has a strong vocalic release, which is perceived by Japanese listeners as native vowel [u].

The perception approach is criticized in the literature for the following reasons. First, since language borrowing is usually done by competent bilinguals, it is doubtful that the borrower has no knowledge of the source language phonology (eg. Paradis 1996, LaCharite and Paradis 2005). Second, many studies show that perception is not the only factor functioning in loan processes, although it is an important factor (eg. Takagi and Mann 1994, Smith 2004). Third, many counter-examples can be found to argue against the perception approach. For example, the English word "tie" and "stick" are rendered as [tʰai] and [su.tʰik] in Korean. However, the /t/ in the English word "stick" is perceptually similar to the tense plosive [t*] in Korean.

2.5.2 The phonology approach

The phonology approach claims that loanword adaptation is a process based on phonology (Itô and Mester 1995, Paradis 1996, 2006. Paradis and LaCharité 1997, 2008, Paradis, Carole and Prunet 2000, Jacobs and Gussenhoven 2000, LaCharité and Paradis 2002, 2005, Shinohara 2004, Uffman 2006, etc). According to this approach the inputs in the adaptation reflect the phonological categories of the source language.

Smith (2006) proposed that the phonological system of the target language plays an important role in loanword adaptation. The loanword from the source language is adapted into the form that fit the phonological requirements of the target language. According to Smith (2006), the English word *jitterbug* is adapted as *jittaabaggu* in the orthographic borrowing in Japanese. Smith claims that the [u] in the *jittaabaggu* [ɕit.ta:.bag.gu] is not provided in the English orthography, so it is the Japanese phonotactic constraint that derives the Japanese SR [ɕit.ta:.bag.gu] by the insertion of an epenthetic vowel.

LaCharite and Paradis (2005) provided several examples to support the phonology approach. The first example is from the loan of English obstruents in Mexican Spanish. In terms of VOT the English voiced stops should be matched to Spanish voiceless stops since both sounds have VOT of 0-30 msec. However, English loanwords with voiced stops are adapted into [voiced] types in Spanish, which is phonologically the same category. In addition, the adaptation of the English high lax vowels in French is based on category proximity, but not phonetic proximity.

Paradis (1996) and Paradis and LaCharite (1997) propose TCRS (Theory of Constraints and Repair Strategies) to account for the adjustment in the adaptation.

According to this theory, the variation between segmental preservation and deletion is restricted depending on how many repair strategies are used. It argues that once preservation of a segment exceeds the threshold, deletion will occur. For example, in “avocat”[avɔka] (French for *lawyer*)>[awɔka] (Fula), the preservation of /v/ by /v/ > /w/ mapping requires a one-step repair. That is the insertion of a [+son] feature. On the contrary, deletion is adopted in “voyage” [vwajaʒ] (French)>[waja:s] (*[wuwaja:s]) (Fula) because preservation would involve a three-step rescue. They are the insertion of a nucleus node, spreading of the glide [w] to the nucleus position, and adaptation of non-native [v] into [w] in native language.

Other studies propose to explain the adaptation of loanword from a constraint-ranking Optimality Theoretic (OT) perspective. Ito and Mester (1995) argued that re-ranking of the same set of faithfulness constraints can explain the different strata of the Japanese lexicon, appearing as a gradual "weakening" of the "force" of various wellformedness constraints. Davidson and Noyer (1997) proposed an analysis of the stress assignment in Hauve adaptation of Spanish loans by re-ranking the faithfulness constraints. Jacobs and Gussenhoven (2000) argued that loan phonology is not a separate component of the grammar and the phonological adjustments in the process of borrowing must be accounted for by the same constraint hierarchy that characterizes the native phonology.

The phonology approach is criticized for its failure to explain all the patterns in the loanword adaptation. For example, the English word “tie” and “stick” are borrowed as [tʰai] and [si.tik] in Cantonese (Silverman 1992). The aspiration feature of these two words is faithfully reflected in Cantonese. This argues against the phonology approach

which claims that the non-phonemic features in the source language will not be adapted in the target language.

2.5.3 The phonetics-phonology approach

The phonology approach can explain the loanword adaptation by phonological process, but it overlooks the role of perception. On the other hand, the perception approach ignores the fact that other factors, such as lexical, phonological, and orthographic knowledge of source language could affect the loanword adaptation. The phonetics-phonology approach argues that the inputs in adaptation process are based on how borrowing language perceives acoustic information in the source language. Then the inputs based on perception are modified for adaptation by the phonological restrictions of the target language (Silverman 1992, Yip 1993, 2002, 2006, Kenstowicz 2003, Davis and Cho 2006, Iverson and Lee 2006, Kenstowicz and Suchato 2006, Boersma 2009, Broselow 2009, Lin 2009). This approach takes both perception and phonology into consideration and treats them as separate levels governed by different grammars (Silverman 1992, Yip 1993, Kenstowicz 2003b, Broselow 2005). According to this theory, the recipient language speakers have no access to the original input. The input to process in the adaptation is the output of the perception level. In other words, it is a form modified from the source pronunciation.

Silverman (1992) claims there are two steps in the process of loanword adaptation, namely ‘perceptual level’ and ‘operative level.’ In the perceptual level inputs are acoustic signals. Therefore, segments which are not salient in acoustic signals are ignored. Whether or not segments are filtered in the ‘perceptual level’ is determined by the degree

of saliency and if the segments exist in the phonological inventory of the borrowing language. Also, the segment that passed ‘perceptual level’ is adjusted based on the phonotactic constraints of the borrowing language. For example, the unaspirated allophone of an English voiceless stop, such as [t] in “stick”, is perceived as an unaspirated stop in Cantonese in the “perception level.” Then at the “Operative level” native phonotactic constraints adjust the perceived sound to fit native syllable structures. Therefore, English “stick” is perceived as /stik[H]/ at the Perceptual level, and adapted as /si[L] tik[H]/ at the Operative level to represent the consonant cluster.

Yip (1993) adopts Silverman’s (1992) concept of the perception and operation levels. However, Yip’s (1993) analysis on the operation level is within the framework of OT, and she claims that the phonological constraints on loan phonology and the native phonology are the same.

Kenstowicz (2003) argues that in the Fon adaptation of French loanwords, the perception level and the Operation level have different constraint hierarchies. In the perception level, the constraint against vowel insertion (i.e. Dep-V) has higher priority than that against consonant deletion (i.e. Max-C). For example, “poste [post]” is adjusted as [pos] in the perception level. However, in the operation level, the Max-C constraint has the priority over Dep-V. Consequently, the [pos] in the perception is readjusted as [posu].

2.6 A reflection on loanword phonology

2.6.1 A reflection on the perception approach and the phonology approach

The perception approach and the phonology approach alone cannot explain all the Mandarin loanwords in Korean. First, the perception approach claims that the mismatch between the source language and the adapted form in the target language is due to the misperception of borrowing forms. In other words, the borrower cannot perceive the source form accurately. The counter examples can be found in Mandarin loanwords in Korean. First, the Mandarin –ui [uei] is represented as 우이[u.i] in Korean, with the nucleus [e] being deleted.

(69)

Pinyin	IPA	Character	Hangul	IPA
an1hui1	an.xwei	安徽	안후이	an. hu.i

At first glance it seems that the deletion of the nucleus [e] is because the borrower fails to perceive this segment due to its phonetic weakness. However, although the official document *Oeraeeo pyogibeop* 외래어 표기법 (Rules for writing foreign language words in Hangul) states that the Mandarin final –ui [uei] is represented as the form 우이[u.i], next to the word 우이[u.i], the form 웨이[we.i] is given in a parenthesis. Therefore, this nucleus [e] is perceived by the borrower, yet it is still deleted in the representation. Second, many studies show that the Mandarin b[p], d[t], and g[k] are perceived to be much closer to the Korean tense stops [p*], [t*] and [k*] than the lax consonants ㅍ[p], ㅌ[t], and ㅋ[k] (Eom 2005:48, Maeng and Kwon 2007). Despite the perception similarity with Korean tense stops, the Mandarin b[p], d[t], and g[k] are transcribed as lax consonants ㅍ[p], ㅌ[t], and ㅋ[k] in the government's transcription.

(70)

Pinyin	IPA	Character	Hangul	IPA
bei3jing1	pei .tɕiŋ	北京	베이징	pe.i . tɕiŋ
da4lian2	ta .liɛn	大連	다롄	ta .lien
gan1su4	kan .su	甘肅	간쑤	kan .s* u

The counter-example to the phonology approach can be found in the adaptation of Mandarin fricative -s[s] in Korean. The Mandarin fricative -s[s] is adapted as the tense consonant [s*] in Korean.

(71)

pinyin	IPA	character	Hangul	IPA
si4chuan1	sɿ.tɕʰwan	四川	쓰촨	s* u .tɕʰwan

Although Mandarin fricative [s] and Korean lax consonant [s] belong to the same phonological category, the Mandarin fricative -s[s] is not represented as the lax [s], but the tense fricative [s*], which is a perceptually similar phoneme. The above discussion shows that in order to account for the Mandarin loanwords in Korean, both the perception and phonology should be considered. The adaptation of Mandarin loanwords in Korean supports the phonetics-phonology approach.

2.6.2 The influence of orthography

The important role of pinyin spelling is easily seen in the government's transcription. For example, the nuclear vowel in -uan is [ɛ] in real speech although the pinyin form is -a.

The transcription in the government's transcription is misled by the pinyin spelling. Also, in the following syllables, the nuclear vowel, which is not shown in the pinyin -iu, -ui, and -un, is omitted in both the government's transcription and Eom's (2002b) transcription.

(72)

Mandarin		Government		Eom	
Pinyin	IPA	Hangul	IPA	Hangul	IPA
diu	tjou	듀	tju	띠우	t [*] i.u
jiu	tejou	주	teu	지우	tei.u
liu	ljou	류	lju	리우	li.u
miu	mjou	뮤	mju	미우	mi.u
niu	njou	뉴	nju	니우	ni.u
qiu	tɕ ^h jou	추	tɕ ^h u	치우	tɕ ^h i.u
xiu	ɕjou	슈	sju	시우	si.u
dui	twəi	두이	tu.i	뚜이	t [*] u.i
dun	twən	둔	tun	똥	t [*] un

2.6.3 The role of the borrower

With the same source form, different borrowers who have the same native language could propose different adapted forms. The reason of this can be summarized as the following two factors. The first one is the inventory of constraints, and the second one is the ranking of constraints.

2.6.3.1 The inventory of constraints

The proposed constraints in the government's transcription and Eom (2002b) differ in the following aspects. First, despite the perception similarity with Korean tense stops, the Mandarin -b[p], -d[t], and -g[k] are transcribed as Korean lax stops ㅃ [p], ㅆ [t], and ㅈ [k] in Korean government's transliteration. This can be explained by a restriction in government's transliteration rule, which states that "a plosive should not be represented by a tense consonant." This constraint, however, is not seen in Eom (2002b). Based on perception similarity, Eom (2002b) transcribes Mandarin -b[p], -d[t], and -g[k] as Korean tense stops [p*], [t*] and [k*].

Second, The [j] glide after [tɕ] or [tɕ^h], which is dropped in government's transcription, is preserved in Eom (2002b), such as [tɕjau]>[tɕa.o] (government)/[tɕja.o] (Eom 2002b). The maker of government's transcription rule proposes a constraint to prevent the occurrence of -j glide after -tɕ or -tɕ^h. This constraint, however, is not seen in Eom (2002b).

Third, the diphthongs and triphongs in Mandarin, which are represented as one syllable except -ai, -ei, -ao, and -ou in the government's transcription, are uniformly represented as two syllables in Eom (2002b). In order to maintain the mono-syllable representation, the government's transcription includes many syllable types which are only seen in onomatopes, such as [twan] 뚱, [tɕ^hwan] 창, etc. Eom's transcription, however, avoids the use of these syllable types by adopting the resyllabification strategy. The constraint on those low-frequency syllable types, which is seen in Eom (2002b), does not exist in the government's transcription.

2.6.3.2 The ranking of constraints

With the same number of constraints, the ranking of these constraints could vary for the following three reasons. First, different borrowers may propose different rankings. For example, the -o in -ong is represented as [uŋ] in government's transcription, while it is represented as [oŋ] in Eom (2002b). In this case perception similarity is placed as more important than source form spelling in the government's transcription, while source form spelling is superior to perception similarity in Eom (2002b). Second, the ranking of constraints proposed by the same borrower is subject to change. For example, Eom (1996) proposes to transcribe Mandarin -ong as [uŋ] out of the consideration for the perception similarity to the source form. However, the -ong is transcribed as [oŋ] in Eom (2002b), and Eom (2002b:87) explains that "the principle of simplicity (being able to transcribe the form directly based on pinyin) is placed, in this study, superior to the principle of faithfulness to the source form in order to increase the continence of transcription." Third, the same translator may propose different ranking in different words. The loanword borrowing, even done by the same borrower, could have different rankings of constraints, and consequently different results. For example, the -o in -ao and -o in -ong in Mandarin are both [ʊ]. However, in the government's transcription the former one is represented as [a.o], while the latter one as [uŋ]. Therefore, the consistency to pinyin spelling is placed superior to the perception similarity in the case of -ao, but the ranking is opposite in the case of -ong.

2.6.4 Summary

The result of this case study on the adaptation of Mandarin loanwords in Korean supports the phonetics-phonology approach in loanword phonology. In other words, both the perception and phonology play a role in the process of adaptation. Previous studies in

loanword phonology aim to find one single theory to explain all of the various adapted forms in the same target language. However, it is always hard to find a clear-cut pattern. This study shows that it is necessary for researchers to pay attention to the role of the borrowers since they could adopt different strategies, including different constraints and different rankings of the same constraints, in the process of borrowing. Different borrowers could have different attitudes toward the marked form and have different understanding on the phonotactic knowledge in the borrower's language. What is the best or the most faithful way to transcribe loanwords could be different from one person's mind to another's. And even for the same form in the source language, the same borrower may propose different adapted forms for different words.

Chapter 3 The Initial System of Middle Sino-Korean

This chapter will compare the initial system in Middle Chinese and that in Middle Sino-Korean. The initial system in MC underwent a change between the time of *Qieyun* and the rhyme tables in Song dynasty. According to Pan and Zhang (2013), the initials in *Qieyun* can be listed as below.

(1)

幫 series	幫 p	滂 p ^h	並 b	明 m			
端 series	端 t	透 t ^h	定 d	泥 n	來 l		
知 series	知 t̚	徹 t̚ ^h	澄 d̚	娘 ŋ			
精 series	精 ts	清 ts ^h	從 dz	心 s	邪 z		
莊 series	莊 tʂ	初 tʂ ^h	崇 dʒ	生 ʂ			
章 series	章 tʃ	昌 tʃ ^h	禪 dz	書 ʃ	船 z	日 ŋ	以 j
牙 velars	見 k	溪 k ^h	群 g	疑 ŋ			
喉 glottals	影 ʔ	曉 h	匣 ɦ				

The initial system in Late Middle Chinese differs from *Qieyun* in the following two aspects. First, LMC makes distinction of bilabial *bang* 幫 series and labial-dental *fei* 非 series. Second, the *xia* 匣 initial before third division becomes the *yun* 云 initial in LMC. The initial system of MiSK introduced in this study is mainly based on the YS edition *Hunmong jahoe*. In order to provide a more comprehensive understanding of the initial system in MiSK, for those non-mainstream representations, the phonetic notations in other sources will be provided in the footnote. The reading of Chinese characters in *HMJH* will be arranged into charts according to the initial in MC. In each chart rhyme

information, *kaihe* "labial roundness", *deng* "division" and the phonetic reconstruction in Pan and Zhang (2013) will be provided for reference. At the end of each chart one can find the number of occurrence for each type of representation in *HMJH*.

3.1 Group *bang* 幫 (Bilabials)

(2)

				幫 p	滂 p ^h	並 b	明 m
戈	合	1	^w ɑ	p ^h a 簸波菠	p ^h a 坡	p ^h a 婆婆懶	ma 魔磨磨
麻	開	2	^ɤ æ	p ^h a 弼孺靶芭 筴疤 p ^h ai 壩	p ^h a 帕爬 葩肥	p ^h a 琶耙爬	ma 瑪螞馬罵 麻蟆
模	合	1	uo	po 圃 ²⁴ p ^h o 布晡 ²⁵	po 浦 ²⁶ p ^h u 鋪	po 捕步鞞抄 pu 簿埠 p ^h o 哺酺蒲葡 ²⁷ 菹	mo 姥暮模襍 mio 墓 ma 媽
灰	合	1	uoi	pɿ 背輩杯	pɿ 坯醅	pɿ 焙培陪 p ^h ai 佩	mɿ 每妹味莓 黴梅媒煤每莓 酶
泰	開	1	ai	p ^h ai 貝			
皆	開	2	^ɤ ei	pɿ 排拜 pii 憊 p ^h ai 韉			
佳	開	2	^ɤ ɛ		p ^h ai 派	p ^h ai 稗穽牌籜	mai 賣 mɿ 買賈
夬	開	2	^ɤ æi			p ^h ai 敗	
祭	開	3	jɛi				miɿ 袂
齊	開	4	ei	pi 篋篋螻鑊算 p ^h iɿ 嬖	p ^h i 批 ²⁸	pi 輦 ²⁹ p ^h iɿ 陛檜	mi 米迷謎

²⁴ *TG* edition[p^ho], *HD*[p^hu], *SU*,*GJ*[p^ho]

²⁵ *HD*[pu](popular reading[p^ho])

²⁶ *TG* edition[p^ho], *YH*[po], *HD*[p^hu], *SG*,*SU*,*GJ*[p^ho]

²⁷ *HD* [pu](popular reading[p^ho])

²⁸ *HD*[p^hiɿ](popular reading[pi])

²⁹ *HD*[p^hiɿ](popular reading[pi])

支	開	3	i _ɛ	pi 卑戾髀筭臂		pi 脾婢	mi 彌靡瀰弭
		3B	^y i _ɛ	pi 碑罍 p ^{hi} i 彼 陂	p ^{hi} i 鉞	p ^{hi} i 被鞞 ³⁰ 髮疲皮	mi 糜縻
脂	開	3	i	pi 乚妣 p ^{hi} i 毗	pi 糲 p ^{hi} i 屁	pi 鼻琵琶 p ^{hi} i 鉍臄	m _ɛ i 寐
		3B	^y i	pi 鄙嚳		p _{ii} i 圮	mi 眉縻湄
豪	開	1	au	po 堡褓寶		p ^{ho} 暴菹袍	mo 帽毛瑁
肴	開	2	^y æu	p ^{ho} 飽苞 p ^{hio} 豹	p ^{ho} 咆泡浮	p ^{ho} 庖庖咆咆跑跑麇鮑 鮑	mo 貌蝥茅
宵	開	3	i _{ɛu}			p ^{hio} 瓢藻鰲	
		3B	^y i _{ɛu}	p ^{hio} 表臙鑣糠			mio 廟苗描貓
侯	開	1	u			pu 部抔	mo 某牡拇母 畝姆 mu 貿楸
尤	開	3	iu				mo 矛眸璆斁
侵	開	3B	^y im		p ^{hum} 品		
桓	合	1	^w an		pan 泮 pən 潘	pan 伴 ³¹ 盤 ³² 癢蟠	man 漫幔蔓鰻 鋤鰻輓
末			^w at	pal 鉢	pal 釅	pal 鉞	mal 抹沫秣
山	開	2	^y ɛn	pan 扮		p ^{han} 瓣	
黠	開	2	^y ɛt	p ^{hal} 八			
刪	開	2	^y æn	pan 蟬 p ^{han} 板			man 蠻
仙	開	3	i _{ɛn}	p ^{hien} 鞭	p ^{hien} 騙 篇	p ^{hien} 便	mien 面綿
		3B	^y i _{ɛn}			p _{ien} 辯弁	mien 婉冕
薛	開	3	i _{ɛt}	piəl 鼈鼈			miəl 滅滅
先	開	4	en	p _{ien} 邊菡 p ^{hien} 蝙		p _{ien} 玼 p ^{hien} 騙 ³³	mien 眠麵

³⁰ SU,GJ[pi]³¹ SG[p^{han}]³² Although the phonetic notation for this character is [span] in *HMJH* (YS edition, TG edition), this is probably a mistake since [sp] consonant cluster is not seen elsewhere. The phonetic notation for this character is [pan] in *DH* and *YJ*.³³ SU,GJ[p_{ien}]

屑	開	4	et				miəl 篋蟻
魂	合	1	uon	pon 畚 pun 鏟	pun 噴	pun 盆	man 瞞 mun 門
沒	合	1	uot			pəl 鵠脖頸葶	
真	開	3	in	pin 殞鬢賓		piŋ 蘋嬪牝 pin 獐獺	min 泯民
		3B	ʷin			pin 貧	mil 蜜
質		3	it	pʰil 霽	pʰil 匹	pʰil 秘	min 旻
		3B	ʷit	pʰil 筆			
鐸	開	1	ak	pak 縛博燭膊	pak 粕 膊灑	pak 箔	mak 幕 mak 膜
江	開	2	ʷəŋ	paŋ 邦	pʰaŋ ₃₄ 胖	paŋ 棒蚌	paŋ 龐 ³⁵
覺			ʷək			pak 雹 鰲鱗	
登	開	1	əŋ	piŋ 崩		piŋ 朋棚棚 ³⁶	
德	開		ək	pik 北		pok 蔔 pik 踣	mik 墨
蒸	開	3	iŋ	piŋ 冰			
職			ik		piək ₃₇ 埽	pʰip 燭 ³⁸	
庚	開	2	ʷæŋ		pʰaiŋ 烹		mliŋ 猛盲虻
陌	開	2	ʷæk	pək 伯 百栢	pək 魄 珀拍	pək 帛舶白	mək 陌
耕	開	2	ʷeŋ	piŋ 繡 ³⁹ 裯 ⁴⁰			mliŋ 萌氓薨 miəŋ 暍
麥	開	2	ʷek	piək 薜			mək 脈 mək 麥

³⁴ HD, SU, GJ [paŋ]

³⁵ HD, SG [paŋ], OP [maŋ] (standard reading [paŋ]), SU, GJ [maŋ]

³⁶ HD [piŋ], OP [pʰaiŋ] (standard reading [piŋ]), SU, GJ [pʰaiŋ]

³⁷ HD [pʰik], OP [piək] (standard reading [pʰik])

³⁸ HD [pʰik], OP [piək] (standard reading [pʰik]), SU, GJ [piək]

³⁹ HD [piŋ], SU, GJ [pʰaiŋ]

⁴⁰ HD [piŋ], SU, GJ [pʰaiŋ]

庚	開	3	ʏjæŋ	piəŋ 柄		piəŋ 病 pʰiəŋ 坪	miəŋ 皿命明鳴 mɿŋ 盟
陌	開	3	ʏjæk	piək 碧			
清	開	3	iɛŋ	piəŋ 餅			
	合	3	ʷiɛŋ				miəŋ 名
昔	開	3	iɛk	piək 壁 襞辟		piək 闢	
青	開	4	eŋ			piəŋ 瓶屏駢 pʰiəŋ 萍	miəŋ 茗暝模瞑
錫	開	4	ek	piək 壁	piək 霹	piək 髀	
東	開	1	uŋ			poŋ 蓬篷	moŋ 矇蠓
	合		ʷuŋ				moŋ 夢
屋	開	3	uk	pok 卜	pok 黻	pok 僕	mok 木沐
	合		ʷuk				mok 目苜牧鵠
Summary				[p]: 61 [pʰ]: 30	[pʰ]: 19 [p]: 17	[p]: 61 [pʰ]: 49	[m]: 124 [p]: 1

The *bang* 幫 initial and the *bing* 並 initial are represented as [p] or [pʰ], in which [p] occurs more frequently than [pʰ]. The *pang* 滂 initial is represented as [pʰ] or [p]. The *ming* 明 initial is represented systematically as [m] in *HMJH*. The reading of 𪔐 [paŋ] is probably derived from the analogy of its phonetic component *pang* 龍, which is a variant form of the *bing* 並 initial character 𪔐[paŋ].

3.2 Group *fei* 非 (Labiodentals)

(3)

				非 f	敷 fʰ	奉 v	微 ŋ
--	--	--	--	-----	------	-----	-----

虞	合	3	jʊo	pu 府俯斧 賦傅夫膚 跗拊 p ^h o 脯	pu 俘郚𪔐稌 苻筭 mu 撫 ⁴¹	pu 父腐釜鮒駙 符芙晷 po 輔	mu 鵠武舞廡務 霧巫誣
廢	合	3	^w jai		p ^h iəi 肺	p ^h iəi 吠	
微	合	3	^w ii	pi 樞篚沸 扉非飛 pɪl 痈 ⁴² pɿi 緋 ⁴³	pi 妃	pi 翡荊腓肥	mi 尾味薇
尤	開	3	iu	pu 缶殍否 魚富鵠	pu 副	pu 婦負阜蝓蜉 苳柎	
凡	合	3	ɤjam			pəm 帆	
乏			ɤjap			pəp 法	
元	合	3	^w iɿn	pən 藩 p ^h an 販 ⁴⁴ 販 ⁴⁵	pən 畚藩幡	pan 飯 pən 燔纂纂擯	man 晚萬
月	合	3	^w iɿt	pal 髮		pəl 罰筏戩哂	mal 轡
文	合	3	jun	pun 粉糞分 饋		pun 盆幘墳粉 漬殯紛焚	min 吻問豐聞 文蚊紋
物			jut		pɪl 拂	pul 佛	mil 物
陽	開	3	iaŋ	paŋ 舫	paŋ 紡	paŋ 房魴	maŋ 網 輞鎗望
東	合	3	juŋ	p ^h uŋ 諷楓 風颶	p ^h uŋ 豐	poŋ 鳳	
屋	合	3	juk	pok 幅福腹 蝠蝠	pok 蝮	pok 服鵬	
鍾	合	3	jʊoŋ		poŋ 捧蜂鋒 烽丰峯	poŋ 縫	
燭	合	3	jʊok			pok 幙	
Summary				[p]:35 [p ^h]:8	[p]:20 [p ^h]:2 [m]:1	[p]:47 [p ^h]:1	[m]:26

⁴¹ YH,SE,HD[mu], SU,GJ[pu]

⁴² Modern SK: [pi]

⁴³ HD,SU,GJ[pi]

⁴⁴ YH[pan]

⁴⁵ HD[pan](popular reading[p^han])

The *fei* 非[f], *fu* 敷 [f^h] and *feng* 奉[v] initials, which are derived from the *bang* 幫 [p], *pang* 滂[p^h] and *bing* 並[b] initial, are represented as [p] or [p^h] in *HMJH*. The reading of 撫[mu] results from the analogy of its phonetic component 無[mu]. The *wei* 微 [ɿ] initial, which is derived from the *ming* 明[m] initial, is represented as [m] in *HMJH*.

3.3 Group *jian* 見 (Velars)

(4)

				見 k	溪 k ^h	群 g	疑 ŋ
歌	開	1	a	ka 歌柯哥	ka 珂		a 我餓 ha 藺
戈	合	1	^w a	koa 菓戈圉鍋	koa 課騾科 蝌窠		oa 臥
	合	3	^w ja			ka 癩	
麻	開	2	^y æ	ka 罌假家袈 茄枷痂笳葭枷			a 研牙芽衙
	合	2	^{wy} æ	koa 寡瓜蝸	koa 鈞胯袴		oa 瓦窠
模	合	1	uo	ko 顧雇鋼孤沽辜姑箍 蛄古拈菇	ko 苦庫袴 枯		o 五伍寤悟 晤吾蜈鰯 朽 io 梧
魚	合	3	jɿ	kə 鋸距車居轢踞 kəi 筥	kə 祛	kə 炬苴距 蓼渠藥鷄	ə 圉御語馭 魚漁
虞	合	3	juo	ku 句駒蚪	ku 驅驅	ku 衢癰臞 蠅	u 愚
哈	開	1	əi	kai 概 həi 菱	kəi 開 kai 鎧 həi 咳		
灰	合	1	uoi		koi 傀塊		ui 桅 ii 礎
泰	開	1	ai	kai 蓋 hoi 僧膾檜			ai 艾 oi 外
皆	開	2	^y ei	kəi 楷 kai 疥介芥疥 kiəi 界階犍 həi 痄	kəi 揩		ai 駭

	合	2	^w _y ɛi				huəi/koi 贖 ⁴⁶
佳	開	2	^y ɛ	kai 街 hɿi 癡懈			ai 涯崖
	合	2	^w _y ɛ	koai 拐拐			
祭	開	3	jɛi				iəi 藝
廢	開	3	jai				iəi 乂 ai 刈
齊	開	4	ei	kiəi 薊髻笄雞	kiəi 稽啓契 鵝溪		iəi 猊霓鯢
	合	4	^w ei	kiəi 桂 kiu 閨			
支	開	3	iɛ	ki 枳		ki 歧	
		3 B	^y iɛ	kii 倚羈 ki 度	kii 欹綺踦	kii 錡騎 ki 技妓芰	ii 蟻義儀
	合	3	^w iɛ	kiu 雉	kiu 窺跬		
		3 B	^w _y iɛ	kuəi 歧鷁		kuəi 跪	
脂	開	3	i			ki 髻耆	
		3 B	^y i	kii 肌 kuəi 机	kii 器	kii 跽	ii 劓
	合	3	^w i			kiu 葵	
		3 B	^w _y i	ku 晷 kui 龜		kuəi 蕒櫃 kiu 逵	
之	開	3	i	kii 箕基 hii 姬	kii 起	kii 棋旗麒 鉗	
微	開	3	ii	kii 蟣璣機譏機	kii 氣 ⁴⁷	kii 璣畿祈	
	合	3	^w ii	kui 鬼貴			
豪	開	1	au	ko 稟誥告羔膏棹橐篙餒皐	ko 槁拷考箐 犒尻		o 熬 熬熬厥熬 ko 翱 ⁴⁸
肴	開	2	^y æu	kio 鉸狡酵校教窖覺咬 交膠郊	kio 曉皎		io 咬
宵	開	3	iɛu		kio 蹻		
		3 B	^y iɛu	kio 嬌	kio 鞫	kio 鞫橋蕎	

⁴⁶HD[hoi], SU,GJ[oi]⁴⁷The notation in H MJH(YS edition) is [skii], but this is probably a mistake since [sk] consonant cluster is not seen elsewhere.⁴⁸YH,SG[ko], HD,OP[o](popular reading[ko]),SU,GJ[o]

蕭	開	4	eu	kio 微叫 hio 梟			
侯	開	1	u	ku 垢筍狗構購觀穀碓 溝 葍筍鉤鞣	ku 口鉤寇 穀寇紉彊 摳		u 藕轔
尤	開	3	iu	ku 九韭廢鳩鬪	ku 糗丘蚯	ku 舅臼樞 裘仇毬楸	u 牛
覃	開	1	əm	kam 紺	kam 坎墘 ham 龕		
合			əp	hap 鵠閣蛤			
談	開	1	am	kam 甘柑汔	kam 瞰坭		
盍			ap		hap 榼		
咸	開	2	^y em	kiəm 鱗			
洽			^y ep	hiəp 袂	kiəp 掐		
銜		2	^y əm	kam 鑑	kam 嵌		am 巖
狎			^y əp	kap 甲胛			
鹽	開	3 B	^y iəm	kəm 臉檢 liəm 臉		kam 芡 kəm 儉 kiəm 鉗	
嚴	開	3	jam	kəm 劍	him 欠		əm 釅嚴
業			jap	kəp 劫			əp 業
添	開	4	em	kiəm 兼縑	kiəm 歉		
帖			ep	hiəp 莢頰筴鋏蛱	hiəp 篋		
侵	開	3 B	^y im	kim 錦今襟金	kim 衾	kim 矧 禽琴檣噲	im 吟
緝	開	3 B	^y ip	kip 給級汲	ip 泣 ⁴⁹		
寒	開	1	an	kan 稈筍幹干肝竿奸漈 han 吁趕	kan 看		an 岸
曷			at	kal 葛 hal 割	kal 渴		al 栳
桓	合	1	^w an	koan 管輅盥館鵠罐觀 官棺冠莞涓觀			
末			^w at	koal 括筈菰	hoal 蜷		
山	開	2	^y en	kan 簡瀋澗間	kan 慳		an 眼
	合		^{wy} en	hoan 鰥			
黠	開	2	^y et	kal 圻			

⁴⁹ YH,SE,IG,SG[ip],HD,OP[kip](popular reading[ip]), SU,GJ[kip].

				al 鵠 ⁵⁰			
刪	開	2	^y æn	kan 澗諫 koan 菅			an 贗鴈顏
	合		^{wy} æn	koan 關			lan 藺
仙	開	3	iɛn		kiən 譴		
		3 B	^y iɛn	kən 審淺 kiən 圀	kən 攘	kən 乾	
	合	3	^w iɛn	kiən 絹			
		3 B	^{wy} iɛn n	kuən 眷卷		koan 顙 kuən 拳權	
元	開	3	iɤn	kən 健健		kən 鍵	ən 言
	合		^w iɤn			kuən 圈	uən 原龜荒 虬
月	開	3	iɤt	kal 羯 al 訐 ⁵¹		kal 碣	
	合		^w iɤt	kuəl 蹶蕨鰈癢	kuəl 闕	kuəl 櫟	uəl 月別
先	開	4	en	kiən 繭繭趺健見肩鵠 hiən 筧			iən 硯研妍
	合		^w en	kiən 吠	kiən 犬		
屑	開	4	et	kiəl 鏃𠂔 kil 桔苦			iəl 覓 hiəl 齧 ⁵²
痕	開	1	ən	kin 根跟	kin 齷		in 恩
魂	合	1	uon	kon 棍滾昆蜚 kun 棍	kon 闕坤		
沒	合	1	uot	kol 鶻骨楮	kul 窟		ol 兀
真	開	3 B	^y in	kən 巾			in 銀
諄	合	3	^w in	kiun 麇	kiun 困	kiun 菌	
殷 迄	開	3	in	kin 謹槿斬斤筋		kin 近近芹	in 埴斷
			it	kəl 吃	kəl 乞肱虺		
文 物	合	3	jun	kun 君軍輶蓐		kun 郡裙	
			jut		kul 鋸		

⁵⁰ Modern SK [al]⁵¹ YH[al], HD,OP[kal](popular reading[al]), SU,GJ[kal]⁵² YH[hiəl], SU,GJ[əl], HD[iəl](popular reading[siəl]),OP[əl](popular reading[siəl])

唐	開	1	aŋ	kaŋ 甌 haŋ 伉	kaŋ 炕穰 haŋ 伉		aŋ 柳
	合		^w aŋ	koaŋ 光胱	koak 續墻		
鐸	開	1	ak	kak 閣脬			ak 腭鏢萼
	合		^w ak	koak 曠榔郭	koak 簾鞞		
陽	開	3	iaŋ	kaŋ 襁薑疆姜韁疆韁	kaŋ 羌蜣	kaŋ 糲強	aŋ 仰
	合		^w iaŋ	hoak 饅	koak 眶筐 閩	koak 誑狂	
藥	開	3	iak	kak 腳			hak 瘡 ⁵³
江 覺	開	2	^ɤ aŋ	kaŋ 講絳絳江扛扛𣎵 haŋ 港	kaŋ 腔		
			^ɤ ak	kak 角桷			ak 嶽樂
登	合		^w aŋ	koiŋ 肱			
德	開	1	ək		kak 刻		
	合		^w ək	kuk 國			
蒸 職	開	3	iŋ	kiŋ 矜			
			ik	kik 棘襪		kik 極	
庚	開	2	^ɤ æŋ	kiæŋ 梗綆莢梗鷄 kaiŋ 羹	kaiŋ 坑		
	合		^{wɤ} æŋ	koiŋ 觥			
陌	開	2	^ɤ æk	kak 骼	kak 客		ak 額
耕	開	2	^ɤ eŋ	kiæŋ 耕			
麥	開	2	^ɤ ek	kiək 膈籊 hiək 革			
	合		^{wɤ} ek	koik 馘 kuk 轔𧈧			
庚	開	3	^ɤ jæŋ	kiæŋ 景境敬鏡京蟹 hiæŋ 荊	kiæŋ 卿	kiæŋ 鯨檠 鯨鯢	
陌	開	3	^ɤ jæk	kik 戟	kiə 綌 kik 隙	kik 屐	iək 𪔐
清	開	3	iEŋ				
		3 B	^ɤ iEŋ				
	合	3	^w iEŋ	kiæŋ 頸	kiæŋ 綌傾	kiæŋ 瓊	

⁵³ HD[hak], OP[iak](standard reading [hak]), SU, GJ[iak]

		3 B	^w _i E ŋ				
青	開	4	eŋ	kiəŋ 徑經	kiəŋ 磬		
青	合		^w eŋ	kiəŋ 扃			
錫	開	4	ek	kiək 塹	kik 喫		ɿik 鷓
東	合	1	uŋ	koŋ 貢功公工蚣	koŋ 孔鞞蛭		
		3	juŋ	kuŋ 宮弓躬	kuŋ 穹		
屋	合	1	uk	kok 谷 kok 穀穀	kok 哭		
		3	juk	kuk 鞠菊掬鷓	kuk 麴		
沃	合	1	ok	kok 梏			
鍾	合	3	juoŋ	koŋ 拱恭筍		koŋ 蜚	
燭	合	3	juok		kok 曲蚰肱	kuk 局	ok 獄玉
Summary				[k]:303 [h]:27 [ø]:2	[k] 110 [h]:7 [ø]: 1	[k]:78	[ø]:91 [h]:4 [k]:2 [l]:1

The *jian* 見 initial is generally represented as [k], and it is represented as [h] in 27 characters in *HMJH*. The [h] reading in *HMJH* can be explained by analogy: 巷(匣[h] initial)> 港[haŋ], 會(匣[h] initial)> 儻[hoi], 解(匣[h] initial)> 癡懈[hɿ], 亥(匣[h] initial)> 荑痄[hɿ], 刑(匣[h] initial)> 荊[hiəŋ], 合(匣[h] initial)> 鵠閣蛤[hap], 汗(匣[h] initial)> 盱趕[han], 還環(匣[h])> 鰥[hoan], 鎔轄(匣[h])> 割[hal], 懼攷矐(曉[h] initial)> 鑊[hoak], 狹峽(匣[h] initial)> 莢頰筴鋏蛺袂[hiəp], 現(匣[h] initial)> 筧[hien] (Pak 1971:31, Kōno1979:359, Lee 1990:131-132). The reading of 訐鵠[al], according to Lee Yundong (1997:117), is a result of the lenition of [k].

The *xi* 溪 initial is generally represented as [k] in *HMJH*. The [h] reading of the *xi* 溪 initial in the following characters results from analogy: 亥(匣[h] initial)> 咳[hɿ], 活(匣[h] initial)> 蜆[hoal], 蒿(曉[h] initial)> 稿[ho], 含(匣[h] initial)> 龕[ham], 歆(曉[h] initial)>

欠[him], 盍(匣[h] initial)> 榼[hap], 狹峽(匣[h] initial)> 篋[hiəp]. The reading of 泣[ip], which is expected to be [kip], results from the lenition of the initial (Lee Yundong 1997:117).

The *qun* 群 initial is represented as [k], and the *yi* 疑 initial is represented as the zero-initial in *HMJH*. The exceptional readings that result from analogy are shown as follows:

亂(來[l] initial)> 亂[lan], 臯(見[k] initial)> 翱[ko], 諺(曉[h] initial)> 瘡[hak].

3.4 Group *ying* 影 (Gutturals)

(5)

				影 ?	曉 h	匣 h	云[h]>[j]
歌	開	1	a	a 阿		ha 河荷鰓	
戈	合	1	^w a	oa 渦倭窩 蒿	hoa 火貨	hoa 禾	
	合	3	^w jɑ		hoa 靴		
麻	開	2	^y æ	a 啞鴉	ha 罇	ha 下廈夏遐瑕 蝦霞鰕	
	合	2	^{wy} æ	oa 蛙窪掭	hoa 化樺花	hoa 華鐸 koa 踝	
模	合	1	uo	o 烏洿薦	ho 琥庠虎呼	ho 戶帛簷栢狐 瑚壺獴湖弧糊 筍衡鬚鳴瓠	
魚	合	3	jɿ	ə 飢			
虞	合	3	jʊɔ	ku 嫗	hu 酗		u 羽雨宇芋孟 栩
咍	開	1	əi	ɿi 愛 ai 埃	hɿi 海醢	hɿi 孩頽	
灰	合	1	uoi	oi 隈隈煨	hoi 賄誨灰 晦	hoi 茴 koi 槐	
泰	開	1	ai			hoi 繪	
皆	開	2	^y ei	ai 噫挨		hɿi 骸 hiəi 薶	
佳	開	2	^y ɛ	ai 矮		hɿi 蟹 hiəi 鞋	
	合	2	^{wy} ɛ		koi 歪	hoa 晝	

央	開	2	^y æi	ai 餵			
	合	2	^{wy} æi			hoa 話	
祭	開	3B	^y jɛi				
	合	3	^{wj} ɛi				ui 隼衛
廢	合	3	^{wj} ai	iəi 濺	huəi 喙		
齊	開	4	ei	iəi 噎	hiəi 醃	kiəi 系蹊	
	合	4	^w ei			hiəi 慧惠 kiu 蛙	
支	開	3B	^y iɛ	ii 椅	hii 戲		
	合	3	^w iɛ		hiu 觶		
		3B	^{wy} iɛ	ui 餵	huəi 毀燬		
脂	開	3	i	i 蚬伊			
		3B	ii	əi 饒			
	合	3	^w i				iu 帷 ui 位
之	開	3	i	ii 意薏醫	hii 蟪		
微	開	3	ii	ii 哀衣	hii 豨		
	合	3	^w ii	ui 威蜚	hui 暉 huəi 卉 虺		ui 葦蝟緯胃 韋幃闡 hui 彙 ⁵⁴
豪	開	1	au	o 襖媼爇	ho 好好薈蒿	ho 昊號豪壕嗥	
肴	開	2	^y æu	io 坳	ho 髑 hio 孝哮	hio 肴	
宵	開	3	iɛu	io 腰			
		3B	^y iɛu	io 夭			hio 鴞 ⁵⁵
蕭	開	4	eu		hio 曉		
侯	開	1	u	ku 藎嘔 漚甌鷗 謳	hu 吼	hu 後后鏃候垓 侯猴猴喉幘	
尤	開	3	iu	u 優擾庖	hiu 鴛		u 右友祐疣 iu 囿
幽	開	3	iu	iu 幼			
覃	開	1	əm	am 暗庵鵠		ham 撼頷含函 hap 鉤 ⁵⁶	

⁵⁴ IG,HD[hui], OP[ui](standard reading [hui]), SU,GJ[ui]

⁵⁵ YH,SE,SG[hio]

⁵⁶ YS edition and TG edition [hap], GMH edition [ham].

合			əp	ap 罨			
談	開	1	am		ham 憨		
咸	開	2	ʷem			ham 餡陷鹹	
銜	開	2	ʷæm			ham 艦檻銜	
狎			ʷæp	ap 鴨壓		kap 匣	
鹽	開	3	iem	iəm 壓壓襪			iəm 炎
		3B	ʷiem	əm 閤醃 am 俺			
		3B	ʷiep				niəp 饑 ⁵⁷
嚴	開	3	jam	əm 淹	him 杵 həm 薺		
業			jap		həp 脇		
侵	開	3B	ʷim	im 飲寤音 陰 am 瘡	him 歆		
緝		3	ip	ip 揖挹			
		3B	ʷip	ip 邑浥	hip 吸		
寒	開	1	an	an 案鞍		han 旱悍鉅𩚑汗 翰皸寒	
曷			at			kal 駢	
桓	合	1	ʷan	uən 盥 oan 腕琬惋	hoan 獾	hoan 換紉茺萑	
末			ʷat	al 幹			
山	開	2	ʷen			kan 癩 han 閑	
黠	開	2	ʷet			hoal 猾	
刪	開	2	ʷæn	an 晏		han 𩚑	
	合		ʷyæn	man 彎 ⁵⁸		hoan 宦豢榘環 寰鬢	
鎋	開	2	ʷæt		hal 瞎	hal 轄	
仙	開	3B	ʷien	ən 鰓			
	合	3B	ʷyien				uən 院衍員
元	開	3	in	ən 堰	hən 獻軒		uən 遠猿園垣

⁵⁷ SG[iəp]⁵⁸ HD, OP[oan] popular reading[man], SU, GJ[oan]

							轅 遠
	合		^w iɤn	oan 畹 uən 苑 踰 駕 冤	huən 萱 萱 暄 貍		
月	開	3	iɤt		həl 蠟		
	合		^w iɤt	əl 噦			uəl 鉞
先	開	4	en	iən 嚙 驚 宴 煙 咽 咽 淵	hiən 蜺	hiən 峴 莧 賢 弦 絃 縣	
	合		^w en			hiən 玄 銜	
屑	開	4	et	iəi 蠚	hiəl 血	hil 翺 hil 齧 齧 hiəl 穴	
	合		^w et				
痕	開	1	ən	in 恩		hin 痕	
魂	合	1	uon	on 搵 瘟	hon 昏 婚 閨	hon 混 渾 囫 魂 餽	
沒	合	1	uot		hol 笏	kol 欄 ⁵⁹	
真	開	3	in	in 印 姻 茵			
		3B	^y in		hin 鱗		
諄	合	3	^w in				kiun 筠 ⁶⁰
質	開	3	it	il 一 壹			
		3B	^y it	il 臚			
殷	開	3	in	in 癰	hin 脰 听		
文	合	3	jun	on 溫 醞	hun 訓 葷 纁 勳		un 暈 鍾 耘 雲
物			jut	ul 蔚 熨			
唐	開	1	aŋ	aŋ 盎		haŋ 統 行 航 吭 衙 翊	
	合		^w aŋ	oaŋ 汪	hoaŋ 誑	hoaŋ 幌 黃 皇 隍 凰 篁 蝗 潢 蟻	
鐸	開	1	ak	ak 堊 惡	hak 壑	hak 鶴 貉	
	合		^w ak	hoak 蠖 ⁶¹ 獲 ⁶²	hoak 瘞	hoak 穫	

⁵⁹ TG edition [hol]⁶⁰ HDOP[iun](popular reading[kiun]), SU,GJ[iun]

					厝	鑊	
陽	開	3	iaŋ	aŋ 秧鴛腴	hiaŋ 饗鄉香		
	合		^w iaŋ	oaŋ 枉			oaŋ 王
藥	合		^w iak				iak 簍
江	開	2	^ɥ ɔŋ		hiaŋ 擷 haŋ 肛	haŋ 項巷缸	
覺			^ɥ ɔk	ak 幄		hak 鸞學 kak 确	
德	合	1	^w əŋ		huŋ 薨		
	開		ək		hik 黑		
蒸	開	3	iŋ	iŋ 鷹膺			
職			ik	ək 億臆			
職	合	3	^w ik		iək 閩		iək 域
庚	開	2	^ɥ æŋ			hæŋ 杏行肱桁 hiæŋ 衡	
	合		^{wɥ} æŋ			hoŋ 橫	
耕	開	2	^ɥ ɛŋ	ɿiŋ 鸚鶯櫻 iəŋ 髡		kɿiŋ 莖 koŋ 紘	
麥	開	2	^ɥ ɛk	ɿik 輓隘		hak 覈核 kiək 翮	
庚	開	3	^ɥ jæŋ	iəŋ 影映英			
	合		^{wɥ} jæŋ		hiəŋ 兄		iəŋ 泳蝶榮
清	合	3	^w iɛŋ	iəŋ 癭瓔纓 嬰			
青	開	4	eŋ		hiəŋ 馨	hiəŋ 脛刑形型硯	
青	合		^w eŋ			hiəŋ 螢	
錫	開	4	ek			hiək 覲	
東	合	1	uŋ	oŋ 塢鶻甕 翁螭翰	hoŋ 烘筊葑	hoŋ 聃汞閔紅 洪虹鴻	
		3	juŋ				uŋ 雄熊
屋	合	1	uk	ok 屋		kok 榭 kok 斛穀	
		3	juk	uk 栢燠			

⁶¹ SE[hoak]⁶² YH[hoak]

沃	合	1	ok	ok 沃塏		kok 鵠 ⁶³	
鍾	合	3	jʊŋ	oŋ 壅癰饔 鵠	hiuŋ 胸		
燭	合	3	jʊŋk		uk 旭		
Summary				[ø]:148 [k]:7 [h]:2 [m]:1	[h]:85 [ø]:2	[h]:159 [k]:14	[ø]:45 [h]:2 [k]:1 [n]:1

The *ying* 影 initial is generally represented as the zero-initial in *HMJH*. In the following 7 characters the *ying* initial is represented as [k]: 嫗嘔漚甌鷗謳葦. As pointed out by Kōno (1979:360) and Pak (1971:50), the readings of these characters result from analogy of the phonetic component 區 [ku]. The other readings that result from analogy include 鑊(匣[h] initial)> 蠖腹[hoak] and 蠻 [man]> 彎[man] (Pak 1971:50).

The *xiao* 曉 initial is generally represented as [h] in *HMJH*. It is represented as the zero-initial in 闕 [iək] and 旭 [uk]. The reading of 闕 [iək] probably results from analogy of the *yun* 云 initial character 域 [iək]. The reading of 旭 [uk], according to Lee (1997:121), is a reflection of the lenition of the initial.

The *xia* 匣 initial is generally represented as [h], and as [k] in 14 characters in *HMJH*. Pak (1971) and Kōno(1979) explain the [k] reading as a result of analogy: 甲(見 initial)> 匣[kap], 鬲(見 initial)> 翻[kiek], 經崕經(見 initial)> 莖[kɛiŋ], 㒼(見 initial)> 紘[koiŋ], 果(見 initial)> 踝[koa], 間(見 initial)> 癩[kan], 塊傀(溪 initial)> 槐[koi], 圭(見 initial)> 畦[kiu], 溪(溪 initial)> 蹊[kiei], 係(見 initial)> 系[kiei]. It is noteworthy that Zhang (2008) views the [k] reading as a reflex of the *xia* initial in Old Chinese. According to Zhang

⁶³ YH,SG,JY,HD[kok] SU,GJ[hok]

(2008), Korean borrowed the stop consonant form of *xia* from Southern Chinese and the fricativized form of *xia* from Northern Chinese. In the process of competing with each other, the fricativized *xia*, which represents standard Chinese, becomes the mainstream, and the stop consonant reading ends up being only preserved in some characters in SK. The hypothesis proposed in Zhang (2008) is susceptible to the question of why only these particular *xia* initial characters, and not others, preserved the [k] reading. This question, however, can be answered by viewing the reading of these characters as a result of analogy based on phonetic components. Moreover, the mix of [k] and [h] is also seen in the *jian* 見 initial, such as 巷(匣[h] initial)>港[həŋ], 會(匣[h] initial)>儻[hoi], 解(匣[h] initial)>懈[hæi], 亥(匣[h] initial)>荄[hæi], 刑(匣[h] initial)>荊[hieŋ], 合(匣[h] initial)>鵠[həp], and in the *xi* 溪 initial, such as 亥(匣[h] initial)>咳[hæi], 活(匣[h] initial)>蛞[hoal], 蒿(曉[h] initial)>槁[ho], 含(匣[h] initial)>龕[həp], 歆(曉[h] initial)>欠[him], 盍(匣[h] initial)>榼[həp], 狹峽(匣[h] initial)>榼[həp]. In addition, the role of analogy is clearly seen in the following examples. The readings of characters with *jia* 夾 as the phonetic component are inclined to be represented with an [h] initial in SK, regardless of the original form in Chinese, such as the *jian* 見 initial: 莢頰筴鋏[hiəp], the *xi* 溪 initial: 篋[hiəp] and the *xia* 匣 initial: 狹峽[hiəp].

The *yun* 云 initial is generally represented as the zero-initial in *HMJH*. Historically speaking, the *yun* 云 initial originated from the *xia* 匣 initial. In *Guangyun*, the *yun* initial only appears before the third division and it is in a complementary distribution with *xia*. In other words, the *yun* initial is a palatalized *xia* in *Qieyun*. The representation in *HMJH*

suggests that SK borrowed the reading from Chinese in which the *yun* initial had already occurred.

The exceptional representations for the *yun* 云 initial are 彙 [hui], 鴉 [hio], 筠 [kiun] and 鱣 [niəp]. Pak (1971:50) claims that 彙 [hui] is possibly from the analogy of 翬 [hui]. This proposal is subject to debate since 翬 [hui] are not commonly used characters. It is contradictory to normal practice to derive the pronunciation of a high-frequency character from a low-frequency one. Lee (1997:58) proposes that this reading may be a reflection of Old Chinese when the initial is [ɣ] or a reflection of the Old Mandarin form [huey]. Kōno (1979) claims that the initial of 彙 [hui] was probably the same as the *xia* initial in the stage of MC. Pak (1971:50) proposes that the [h] in 鴉 [hio] results from the analogy of the initial of 號 [ho]. The reading of 筠 [kiun] is derived from the analogy of its phonetic component 均 [kiun], which is a *jian* 見 initial character. In *HMJH*, under the notation of 鱣 [niəp], it states that "the correct reading should be the same as 葉 [iəp] (正音葉)." According to Kōno (1979:362), there were [j]>[n] and [j]>[r] sound changes in initials in the central and southern dialects in Middle Korean. These sound changes caused confusion between [j] and [n] in the initial position of a syllable. The reading of 鱣 [niəp] may results from the false regression of this sound change.

3.5 Group *duan* 端 (Alveolar stops, laterals and nasals)

(6)

				端 t	透 t ^h	定 d	泥 n	來 l
歌	開	1	a		t ^h a 他	ta 爹 t ^h a 駄舵駝跞	na 挪	la 羅蘿籬籬

戈	合	1	^w a	th a睡	th a湮	th a惰綠	na 懦糯掇	la 裸蓀瘰螺 稞lo 騾
模	合	1	uo	to 賭覩都 tu 蠹	th o 土吐菟 兔	to 肚鍍度屠 徒途圖	no 弩奴	lo 櫓虜滷輅 鷺路露臚蘆 轡顙鱸繡鷗 攔爐酆 loi 賂 no 膊
魚	合	3	jɿ					liə 侶膂旅 濾鏹間廬驢
虞	合	3	jɿo					lu 縷樓
哈	開	1	əi	tʰai 戴 tai 歹	th ʰai 態 tʰai 貸	tʰai 袋黛代玳 擡臺 th ʰai 怠 苔烺	nai 鼎	loi 賚 lʰai 藜
灰	合	1	uoi	tʰai 碓對 th oi 鎚	th oi 腿退蕤 腿	th oi 頹癘	nʰai 內 noi 餛	lʰai 耒 loi 偏播雷 疊
泰	開	1	ai	帶 tʰai	th ai 汰	th ai 鈇	nai 奈	loi 癩瀨
祭	開	3	jɛi					liəi 例礪 liə 蠣
齊	開	4	ei	tiəi 邸胝墀 帝堤羝 th iəi 蒂蝟嚏	th iəi 涕 tiəi 梯	tiəi 弟涕第涕 涕鵠蹄啼涕 緋萋踢裼 th iəi 髭棣	ni 泥	liəi 鯉醴禮 桼儷荔犁盍 鸛藜 iəi 隸 ⁶⁴
支	開	3	iɛ					li 罍璃籬蠅
		3B	^y iɛ					li 羸
脂	開	3	i			ti 地		li 履痢痢梨
	合	3	^w i					liu 壘淚藟
之	開	3	i					li 鯉裡理里 裏吏狸嫫 ni 李
豪	開	1	au	to 島擣禱刀舠	th o 套 th io 縹 to 饗	to 道稻盜桃陶 萄淘濤	no 瑙腦 nio 臍	lo 老鵠笮撈撈 撈 lio 潦輶醪 loi 牢
宵	開	3	iɛu					lio 燎
蕭	開	4	eu	tio 鳥釣雕	tio 眺耀	tio 鈔跳蛸鰲	nio 尿	lio 蓼繚僚

⁶⁴ CJM[iəi], HD, SU, GJ [liəi]

				銅 thio 貂		條 thio 韶條		鷓
侯	開	1	u	tu 斗抖蚪逗 to 筍 thu 鬪	thū 偷 tiu 鋤	tu 痘莛脰餵 頭竇 thū 骰庖餒	niu 穀	lu 樓癭漏鏤 簍蝟體樓藁 樓藪
尤	開	3	iu					liu 柳畱瘤 溜溜琉琉榴 鷓流
覃	開	1	əm		tham 探貪	tam 潭蟬曇薄	nam 男南	lam 婪 nam 嵐
合			əp		tap 踏踏		nap 納衲	
談	開	1	am	tam 膽擔	tam 毯莢 tan 坍	tam 噉淡談痰		lam 攬熅覽 纜濫籃藍檻
盍			ap		thap 塔搭榻 塌			lap 蜃 nap 臘臘
鹽	開	3	iem					liem 殮驗廉 匳簾帘鎌賺 歛 ⁶⁵
葉		3	iɛp					liɛp 鬣獵
添	開	4	em	tiəm 店	thiəm 舔添	tiəm 簞韃 tiəm 菟 thiəm 甜	niəm 帖 tsiəm 拈 ⁶⁶	
帖			ep		thiəp 帖貼	tiəp 蝶牒 thəp 牒	niəp 捻	
侵	開	3	im					lim 廩櫟 lim 霖林
緝		3	ip					lip 粒笠立 苙
寒	開	1	an	tan 担疸旦 簞丹禪	than 炭灘攤 攢	than 袒彈 tan 壇		lan 懶瀾欄 蘭
曷			at		tal 撻獺闥 鞞	tal 蓬		lal 辣糲
桓	合	1	wan	tan 鍛礮	tan 湍獐	tan 段	nan 暖	lan 卵鸞
末			wat			thal 奪		
仙	開	3	iɛn					liɛn 輦鯁

⁶⁵歛 [liəm] is a xiao 曉 initial tan 談 rhyme character. In *HMJH*, 歛 [liəm] is used as a variant of 斂 [liəm], which means "to collect".

⁶⁶ *HD*[tiəm], *OP*[niəm] (popular reading [tiəm]), *SU, GJ*[niəm] *YH*[liəm]

薛	開	3	iɛt					liəl 蜩烈鴛
	合	3	^w iɛt					liəl 劣
先	開	4	en	tiən 典巔癲		tiən 殿澱電淀 甸莫眈癡靛 田	niən 撚 niən 年	liən 鍊憐蓮
	合		^w en		thiən 天			
屑	開	4	et		thiəl 饕鐵	til 埵跌	niəl 捏	
痕	開	1	ən		thʌn 吞			
魂	合	1	uon	ton 頓墩墩	ton 褪墩	ton 沌圉豚鈍 tun 臀鈍屯		
沒	合	1	uot	tol 柎		tol 堦	nul 訥	
真	開	3	in					lin 恪麟麟 麟鄰
質		3	it					liul 栗策
諄	合	3	^w in					liun 輪淪
術			^w it					liul 葦
唐	開	1	aŋ	taŋ 檔璫觚	thəŋ 帑錫湯	taŋ 塘糖堂棠 螳螳塘糖 thəŋ 蕩	naŋ 曩囊	laŋ 浪狼廊 螂稂
鐸	開	1	ak		thak 托橐籥 託 thik 驪 ⁶⁷	thak 鐸		lak 駱落珞 絡
陽	開	3	iaŋ					liaŋ 兩輛糧 樑娘梁涼梁
藥	開	3	iak					liak 掠
登	開	1	əŋ	tiŋ 鐙凳橙 燈		tiŋ 藤騰籐	niŋ 能	
德	開	1	ək	tək 德	thik 慝			lik 肋勒𩶇
蒸	開	3	iŋ					liŋ 綾菱陵 蔭
庚	開	2	^ʷ æŋ					liŋ 冷
清	開	3	iɛŋ					liɛŋ 嶺領令
青	開	4	eŋ	tiɛŋ 頂鼎碇 釘顛丁釘疔	thiɛŋ 廳聽 tiɛŋ 汀靚	tiɛŋ 艇亭庭廷 睟蜓	niɛŋ 佞	liɛŋ 鈴伶零 圉櫺聆鈴鵲

⁶⁷ TG edition: [thak]

								瓚翎靈
錫	開	4	ek	tiək 嫡 鐫鞞躡药杓	t ^h iək 趯	tiək 荻敵笛狄 羅覲	nik 溺	liək 曆歷歷 霰羶 lik 櫟 礫
東	合	1	uŋ	toŋ 蝨凍棟 湏東蠱	t ^h oŋ 桶痛	toŋ 動峒衙 桐瞳童銅僮	noŋ 膿	loŋ 籠寵龕 櫛隴韃寵
		3	juŋ					liuŋ 隆
屋	合	1	uk		tok 禿鵠	tok 牘牘牘 櫛齎瀆獨 讀		lok 轆鹿麓 漉礪麓瀝 nok 祿
		3	juk					liuk 陸六
冬	合	1	oŋ	toŋ 冬	t ^h oŋ 統	toŋ 疼彤	noŋ 膿農	
沃	合	1	ok			tok 轟磚		
鍾	合	3	juoŋ					loŋ 壘龍
燭	合	3	juok					lok 綠
Summary				[t]:76 [t ^h]:7	[t ^h]:50 [t]:23	[t]:127 [t ^h]:26	[n]:35 [ts]:1	[l]:239 [n]:6 [ø]:1

The *duan* 端 initial is mainly represented as [t]. The [t^h] reading in the following eight characters: 睡蒂蝨噠鬪鐫鎚貂 are believed to be a result of analogy in Pak (1971). Pak (1971:59) states that 蒂 [t^hiəi] and 鎚 [t^hoi] result from the analogy of *tou* 透 [t^h] initial characters 殢 [t^hiəi] and 焔 [t^hoi] respectively. However, 殢 [t^hiəi] and 焔 [t^hoi] are not high-frequency characters, so they are less likely to be the source of analogy.

The *tou* 透 initial is generally represented as [t^h], or secondly [t]. The *ding* 定 initial is mainly represented as [t], or secondly [t^h]. The *ni* 泥 initial is represented as [n] in *HMJH*. The reading of 拈 [tsiəm] in *HMJH* is probably derived from the analogy of the phonetic component 占 [tsiəm].

The *lai* 來 initial is generally represented as [l] in *HMJH*. It is represented as [n] in the following six characters: 臘 嵐 藍 李 祿 臚, and as a zero initial in 隸 [iəi]. In Modern Korean spoken language the [l] in the syllable initial position will be dropped when it is followed by an [i], otherwise it becomes [n]. This is called *Dueum beopchik* [Rule of initials]. The reading in the above characters may be a reflection of the reading after the application of *Dueum beopchik*.

3.6 Group *zhi* 知 (Retroflex stops and nasals)

(7)

				知[t]	徹[tʰ]	澄[d]	娘[n]
麻	開	2	^y æ	tʰa 打		ta 茶 tsʰa 搽	
	合	2	^{wy} æ	tsoa 𣎵			
魚	合	3	jɤ	tiə 瀝 tiəi 豬	tiə 楮 擣	tiə 苧 杼 筋 儲	niə 女
虞	合	3	jʉo	tiu 拄 株 蛛		tiu 柱 嶺 廚	
佳	開	2	^y ɛ				nai 孌
夬	開	2	^y æi		tʰai 薑		
祭	開	3	jei			tʰiəi 穉	
支	開	3	iɛ	ti 智 蚰	tsʰi 驕	tʰiəi 馳 ti 池	
		3B	^y iɛ			tʰiu 鍾 槿	
脂	開	3	i		tʰi 絳	tʰi 雉 稚 ti 墀	ni 尼
	合	3	^w i			tʰoi 椎	
之	開	3	i		tʰi 癡 tʰai 咎	tʰi 痔	ni 你
肴	開	2	^y æu	tio 嘲		to 棹	nio 鬧 io 鐃 ⁶⁸

⁶⁸ HD, SU, GJ [nio]

宵	開	3	iɛu	tio 朝		tio 朝潮	
尤	開	3	iu	tiu 肘晝輟宙冑 紬籌疇			niu 紐鈕扭扭 liu 扭
咸	開	2	^y ɛm	ts ^h am 站		tam 賺	
洽			^y ɛp	tsap 劓			
鹽	開	3	iɛm		t ^h iɛm 諂 tiɛm 覘		
葉		3	iɛp				niɛp 鑷
侵	開	3	im	t ^h im 砧 sim 榼			nim 賃
緝		3	ip			t ^h ip 蟄	
山	開	2	^y ɛn			t ^h an 綻	
仙	開	3	iɛn	tiɛn 驥		tiɛn 塵	niɛn 碾
	合	3	^w iɛn	tiɛn 轉		iɛn 椽	
薛	開	3	iɛt	t ^h iɛl 哲			
	合	3	^w iɛt	t ^h iɛl 啜			
真	開	3	in	tin 珍		tin 塵	
質		3	it	til 銍		til 姪帙	
諄	合	3	^w in	tun 窰	ts ^h iun 椿		
術			^w it		t ^h iul 黜	t ^h iul 菴	
陽	開	3	iaŋ	tiaŋ 帳張 t ^h iaŋ 脹漲	t ^h iaŋ 輶	tiaŋ 丈杖腸場	niaŋ 娘孃 iaŋ 釀
藥	開	3	iak	t ^h iak 着			
	合		^w iak				
江	開	2	^y ɔŋ	tsoaŋ 椿		taŋ 幢	
覺			^y ɔk	t ^h ak 卓 啄啄瘡		t ^h ak 濁	
蒸	開	3	iŋ	tiŋ 徵		tiŋ 澄	
職			ik		t ^h ik 鶻救	tik 直	
庚	開	2	^y æŋ		t ^h ʌiŋ 撐	tiæŋ 鍠	
陌	開	2	^y æk		t ^h ʌik 圻	t ^h ʌik 宅澤	
麥	開	2	^y ɛk	tiək 謫			
清	開	3	iɛŋ	tiɛŋ 貞	tiɛŋ 螳檉楨	tiɛŋ 呈程	

昔	開	3	iek			t ^h iək 擲躑	
東	合	3	juŋ	tiuŋ 中 t ^h iuŋ 忠衷		t ^h iuŋ 沖蟲翀 tiuŋ 蚱	
屋	合	3	juk	tiuk 竹 t ^h iuk 築		t ^h iuk 軸逐柚舳 舳	
鍾	合	3	jʊŋ	t ^h ion 塚	t ^h ion 寵		noŋ 醴
燭	合	3	jʊk		t ^h iok 躑		
Summary				[t]:32 [t ^h]:12 [ts]:3 [ts ^h]:1 [s]:1	[t ^h]:11 [t]:7 [ts ^h]:2	[t]:34 [t ^h]: 24 [ts ^h]:1 [ø]:1	[n]:15 [l]:1 [ø]:2

The *zhi* 知 initial is generally represented as [t] or [t^h] in *HMJH*. In the following three characters 𪛗 [tsoa], 𪛗 [tsap] and 椿 [tsoaŋ], the *zhi* initial is represented as [ts]. This is probably a result of the palatalization in Middle SK. The reading of 𪛗 [sim] in *HMJH* is derived from the analogy of the phonetic component 𪛗 [sim] (Pak 1971:59).

The *che* 徹 initial is generally represented as [t^h] or [t] in Middle SK. It is represented as [ts^h] in the following two characters: 𪛗 [ts^hi] and 椿 [ts^hiun]. The reading of 椿 [ts^hiun] in *HMJH* results from analogy: 春(昌[t^h] initial)>椿[ts^hiun]. The reading of 𪛗[ts^hi] is a result of the palatalization of the [t^h] initial in Middle SK.

The *deng* 澄 initial is represented as [t] or [t^h] in Middle SK. The reading of 椽 [iən] is probably derived from the analogy of the high-frequency character 緣 [iən]. 搽[ts^ha] could be either a result of the palatalization in Middle SK or a borrowing from Old Mandarin.

The *niang* 娘 initial is generally represented as [n] in Middle SK. It is represented as [l] in 𪛗 [liu] and as the zero-initial in 釀 [iaŋ] and 饒 [io]. In *HMJH* the reading of 釀 [iaŋ] is the same as *ri* 日 initial characters 襪囊[iaŋ] and the *xin* 心 initial character 𪛗

[iaŋ]. This exemplifies the effect of analogy based on phonetic component. The reading of 鎬 [io] results from analogy of the phonetic component 堯[io].

3.7 Group *jing* 精 (Alveolar fricatives and affricates)

(8)

				精[ts]	清[tsʰ]	從[dz]	心[s]	邪[z]
歌	開	1	a	tsoa 左	tsʰa 搓	tsa 齏咱	sa 抄	
戈	合	1	ʷa			tsoa 坐矧 ⁶⁹ tsʰa 銼	soa 鎖 sa 梭蓑	
麻	開	3	jæ	tsiə 姐 tsiə 置 tsʰia 借		tsia 襌 ⁷⁰	sia 鐫寫 ⁷¹ 瀉卸	sia 斜
模	合	1	uo	tso 祖租	tsʰo 醋	tso 祚	so 訴唢素 塑蘇酥榼	
魚	合	3	jɿ	tsiə 蛆	tsiə 疽沮鴟	tsiu 脍	siə 絮	siə 嶼芋序漱
虞	合	3	jʊo	tsʰiui 嫵			siu 鬚	
哈	開	1	əi	tsʌi 宰穀載 栽	tsʰʌi 綵菜	tsʌi 裁財才	sʌi 塞賽 sii 頤	
灰	合	1	uoi		siu 焯	tsoi 罪		
祭	開	3	jɛi	tsiəi 祭際				
祭	合	3	ʷjɛi				siəi 歲	
齊	開	4	ei	tsiəi 濟 霽濟擠 壘壘 tsʌ 沛	tsʰiəi 砌 tsʰiə 妻	tsiəi 薺臍 蟻	siəi 洗 siə 壻西棲 犀 sii 嘶	
支	開	3	iɛ	tsʌ 紫髭	tsʌ 薊雌	tsʌ 黷 疵	sʌ 璽賜撕 鵬	

⁶⁹ TG edition [tsʰa]

⁷⁰ TG edition [tsʰia]

⁷¹ The Sino-Korean reading of *xie* 寫 is [s*ia] in *HMJH* (both *YS* and *TG* edition) and [sia] in *CJM*, *YH* and *SG*. Synn (2006:65) notes that "in *HMJH*, the native Korean reading under the entry *xie* 寫 is [s*il]. The [s*] initial in [s*ia] is probably derived from the [s*] in the native Korean reading [s*il]."

							sii 廝	
		3B	^y iE				siu 髓	
脂	開	3	i	tsΛ 姊資姿 tsΛi 齏		tsΛ 自瓷資	sΛ 死四	
	合	3	^w i	ts ^h iui 醉 ts ^h ui 翠		ts ^h iuiəi 悴	siu 萎	siu 燧燧簪穗
之	開	3	i	tsΛ 子滋孳 籽磁聶 tsΛi 梓		tsΛ 字忒慈 驚鷄	si 藁 sΛ 笥司鴛 蘇絲	sΛ 姒耜祀飼 寺祠詞
豪	開	1	au	tso 藻早 蚤澡棗 龜糟	ts ^h o 草驛 tso 糙	tso 皂造 槽槽 曹槽	su 嫂艘 so 搔縲 tso 噪臊	
宵	開	3	iEu	ts ^h io 椒焦 礁蕉鷄	ts ^h io 锹栗	ts ^h io 誚樵樵	sio 笑宵霄 焞鞘 ts ^h io 綃	
		3B	^y iEu				sio 嘯簫蠟	
侯	開	1	u	tsu 奏	tsu 腠		su 擻瞍叟 藪嗽漱	
尤	開	3	iu	tsiu 酒 ts ^h iui 僦	ts ^h iu 秋 鰕楸湫 鞦鶯揪 鞦	ts ^h iu 鶯	siu 繡鏤鏟	siu 袖岫洵
覃 合	開	1	əm	tsam 揩		tsam 蠶	ts ^h am 糝 ⁷²	
			əp	tsap 呖				
談 盍		1	am				sam 三	
			ap				sap 𪗇	
鹽	開	3	iEm		ts ^h iəm 籤	tsam 潛		
葉		3	iEp	tsiəp 桱 ts ^h iəp 睫	ts ^h iəp 妾			
侵	開	3	im		ts ^h im 寢蓂	sim 葦	sim 心	sim 燭鬻
緝	開	3	ip		tsip 緝	tsip 集 tsip 楫		sip 習
寒 曷	開	1	an	ts ^h an 讚	ts ^h an 爨 鑪驢		san 傘撒珊	
			at	ts ^h al 拶				
桓	合	1	^w an	ts ^h an 鑽			san 算 酸狻餒 suən 蒜	

⁷² TG edition HMJH: [səm]

仙	開	3	iɛn	tsiən 剪 箭 煎 tsʰiən 韃		tsiən 錢錢 tsʰiən 踐賤	siən 癍 燹 藓 獮 線 仙 杣	iən 涎 ⁷³
	合	3	w _i ɛn			tsʰiən 泉 iən 吮 ⁷⁴		siən 旋
薛	開	3	iɛt				siəl 瘡	
	合	3	w _i ɛt				siəl 雪	
先	開	4	en	tsiən 竿 箋 tsʰiən 薦	tsʰiən 蒨 千 撚	tsiən 前	siən 跣 霰	
屑	開	4	et	tsiəl 癰 節	tsiəl 竊		siəl 糲 楔	
魂	合	1	uon	tson 尊 tsun 樽	tsʰon 寸 村	tson 蹲 tsun 蹲	son 孫 蓀 蓀 飧	
沒	合	1	uot	tsol 卒 碎				
真 質	開	3	in	tsin 進 津	tsʰin 親	tsin 螻	sin 信 訊 顛 辛 薪	sin 燼
		3	it		tsʰil 七 漆 漆	tsil 疾	sil 蟋 sil 膝	
諄	合	3	w _i in	tsiun 俊 僞	tsiun 皴		siun 筍 tsiun 隼	siun 旬
術			w _i it				siul 鉞 hiul 恤 tʰiul 誅	
唐	開	1	aŋ	tsaŋ 葬 賊	tsʰaŋ 鶻 倉		saŋ 賴 噪 礫 療 桑	
鐸	開	1	ak		tsʰak 錯	tsak 柞 昨 tsʰak 鑿	tsak 索	
陽	開	3	iaŋ	tsiaŋ 醬 將 漿 漿	tsʰaŋ 槍 搶 tsiaŋ 將	tsiaŋ 匠 檣 蓄 牆 牆	siaŋ 養 相 箱 廂 緇 iaŋ 驤	siaŋ 象 橡 翔 庠
藥	開	3	iak	tsiak 雀	tsiak 鵲 芍	tsiak 嚼		
江 覺	開	2	ʷoŋ		tsʰaŋ 窗		saŋ 瀧 soaŋ 雙	
			ʷok				sak 朔 槊 嘯	
登	開	1	əŋ	tsiŋ 罍 贈		tsiŋ 贈	siŋ 僧	
德	開		ək			tsək 賊	sək 塞	
蒸	開	3	iŋ	tsiŋ 甌		tsiŋ 繒		

⁷³ YH, HD[iən], OP[siən](standard reading [iən]), SU, GJ[siən]⁷⁴ HD, SU, GJ[tsiən]

職			ik	tsik 稷 tsik 鯽			sik 息	
清	開	3	iɛŋ	tsiəŋ 井精 tsʰiəŋ 菁晴	tsʰiəŋ 清園	tsiəŋ 穽情 tsʰiəŋ 晴	siaŋ 姓性	siaŋ 錫
昔	開	3	iek	tsiək 禱跡 tsʰiək 脊鵲	tsʰiək 刺 tsiək 磧	tsiək 籍 tsʰiək 瘡堵	siək 昔 馮 礪腊烏	siək 夕席 汐歹叻
青	開	4	eŋ	tsiək 勛績	tsʰiəŋ 青鯖蜻		siaŋ 星鯉	
錫	開	4	ek		tsʰiək 戚鍼		siək 錫浙蜥 tʰiək 楊	
東	合	1	uŋ	tsoŋ 髮鰓	tsʰoŋ 葱囟聰	tsʰoŋ 叢		
		3	juŋ				sioŋ 菰賊	
屋	合	1	uk	tsok 鏃		tsok 族		
		3	juk				siuk 夙蓐	
冬	合	1	oŋ	tsoŋ 綜宗				
鍾	合	3	juoŋ	tsioŋ 蹤			soŋ 騷	sioŋ 頌誦訟 松
燭	合	3	juək	tsiok 足			sok 栗	
Summary				[ts]:84 [tsʰ]:20	[tsʰ]: 52 [ts]: 13 [s]:1	[ts]:56 [tsʰ]: 14 [ø]:1 [s]:1	[s]:137 [ts]:3[tsʰ]:2 [tʰ]:2 [h]:1 [ø]:1	[s]:39 [ø]:1

The *jing* 精 initial is represented as [ts] or [tsʰ] in *HMJH*. The mainstream representation of the *qing* 清 initial is [tsʰ], although [ts] reading can be found in some characters. The *cong* 從 initial is represented as [ts] or [tsʰ] in Middle SK. The reading of 吮 [iəŋ] results from analogy of the *yi* 以 initial character *yun* 允 [iəŋ]. The reading of 葦[sim] is derived from the analogy of *shu* 書 initial characters 嬋[sim] and 暉[sim] (Pak 1971:80). The *xin* 心 initial is generally represented as [s]. The following lists the irregular readings: 隼

[tsiun], 噪[tso], 臊[tso], 糝[ts^ham], 綃 [ts^hio], 誅[t^hiul], 謁[t^hiək], 恤 [hiul] and 驤[iaŋ].

All of these readings result from analogy: 準(章[tɕ] initial)>隼[tsiun], 澡澡噪(精[tɕ] initial)> 噪臊[tso], 參(清[tɕ^h] initial)>糝 [tsham], 悄(清[tɕ^h] initial)>綃 [ts^hio], 怵跡(徹[t^h] initial)>誅[t^hiul], 剔惕惕(透[t^h] initial)>謁[t^hiək], 血(曉[h] initial character)>恤 [hiul], 壤穰(日[ŋ] initial)>驤[iaŋ] (Pak1975:82, Kōno 1979:391). The *xie* 邪 initial is represented as [s] in Middle SK. The reading of 涎 [iən] is derived from the analogy of its phonetic component 延 [iən].

3.8 Group *zhuang* 莊 (Retroflex fricatives and affricates)

(9)

				莊[tʂ]	初[tʂ ^h]	崇[dʒ]	生 ʂ
麻	開	2	^y æ	tsa 鮚炸炸榨鼓 tsia 槌 ts ^h a 魑瘡 sa 詐渣	ts ^h a 岔汊杈杈 叉	sa 槎	sa 沙裟紗鯊
	合	2	^w yæ				soa 耍
魚	合	3	jɤ	tso 菹	ts ^h o 礎	sə 鋤	so 所疏蔬梳
虞	合	3	jyɔ		ts ^h u 翳	ts ^h u 雛	
泰	開	1	ai	tsʌi 麋		tsiəi 儕 sɿi 豺	
皆	開	2	^y ei	ts ^h ai 債跼	ts ^h a 釵	sɿi 柴	ts ^h ai 醜
支	開	3	iɛ				sɿi 筵醺
脂	開	3	i				sʌ 師獅獅
	合	3	^w i				siu 帥 ts ^h oi 櫟
之	開	3	i	tsʌi 滓 ts ^h ii 輜緇 sʌ 鎚	ts ^h i 廁	si 柿 sʌ 士事	sʌ 史

肴	開	2	^y æu	tso 爪筴 koa 抓 ⁷⁵	ts ^h io 炒鈔	so 巢	so 鞘 sio 弭蛸筍 ts ^h io 梢梢
尤	開	3	iu	ts ^h iu 𢇛𢇛 ts ^h u 𢇛𢇛	ts ^h u 𢇛		su 瘦菟洩蝮 搜
咸	開	2	^y em	tsam 蘸		ts ^h am 讒饒	sam 衫
洽			^y ep		sap 錫插		sap 敵簪
銜	開	2	^y aem				sam 衫
侵	開	3	im	tsam 簪 ts ^h am 譚		tsam 涔岑	sam 蔘
緝		3	ip	tsip 戢			
山	開	2	^y en	tsan 盞		tsan 棧	san 產驢山疝
黠	開	2	^y et			ts ^h al 釧	sal 殺
刪	開	2	^y aen		san 鏟		san 訕
	合		^{wy} aen			ts ^h an 饌	soan 孿櫬
鐸	開	2	^y aet		ts ^h al 刹		
	合	2	^{wy} aet				soa 刷
臻	開	3	in	tsin 榛	ts ^h in 齟𣴊		
櫛		3	it	tsil 櫛			sil 瑟蝨
諄	合	3	^w it				sol 蟀
陽	開	3	iaŋ	tsaŋ 粧裝	ts ^h aŋ 瘡	tsaŋ 狀 saŋ 牀	saŋ 霜孀
覺	開	2	^y ok			ts ^h ak 鉞	
職	開	3	ik	ts ^h ik 仄 ts ^h lik 昃	ts ^h ik 廁		slik 穢嗇
庚	開	2	^y aŋ		t ^h liŋ 鐺		sliŋ 生甥笙銑 𪗇 siŋ 猩
陌	開	2	^y æk	ts ^h lik 笮	ts ^h lik 柵		
耕	開	2	^y eŋ	tsliŋ 箏諍			
麥	開	2	^y ek	tsiæk 幘 ts ^h lik 讀	ts ^h lik 策冊		
Summary				[ts]:22	[ts ^h]:20	[s]:9	[s]:52

⁷⁵ TG edition[tsoa] ,HD,SU,GJ[tso]

	[ts ^h]:15 [s]:3 [k]:1	[s]:3 [t ^h]:1	[ts]:5 [ts ^h]:6	[ts ^h]:4
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The *zhuang* 莊 initial is generally represented as [ts] or [ts^h] in *HMJH*. In the following three characters 詐 [sa], 渣 [sa] and 鑄 [sΛ], the *zhuang* initial is represented as [s]. The reading of 鑄 [sΛ] is derived from the analogy of the phonetic component 事 [sΛ]. The *Zhuang* initial is represented as [k] in 抓 [koa]. This is possibly derived from the analogy of the character 瓜 [koa]. The notation for 抓 [koa] is changed to [tsoa] in the *DD* edition *HMJH*.

The *chu* 初 initial is generally represented as [ts^h]. In the following three characters 鏟[san], 鍤[sap] and 插[sap], the *chu* initial is represented as [s]. The reading of 鏟[san] is probably derived from the analogy of the *shan* 山 initial character 產[san]. The reading of 鍤插[sap], according to Pak (1971:82), results from the analogy of 歃[sap].

The *cong* 崇 initial is represented as [s], [ts] or [ts^h]. It is not easy to conclude which reading is the representative form. Kōno (1979) claims that the [s] reading is mainly seen in the vernacular reading, and thus should be the older layer, while the [ts] and [ts^h] is a new layer influenced by Chinese at later time.

The *sheng* 生 initial is represented as [s] except the following four characters 梢 [ts^hio], 艄 [ts^hio], 榦 [ts^hoi] and 醴 [ts^hai]. The readings of these four characters result from analogy: 峭峭隋(清[ts^h] initial)> 梢艄 [ts^hio], 衰(初[tɕ^h] initial)> 榦 [ts^hoi], 債(莊[tɕ] initial)> 醴 [ts^hai] (Pak 1975:82).

3.9 Group *zhang* 章 (Palatal fricatives and affricates)

(10)

				章 tɕ	昌 tɕʰ	禪 dz	書 ɕ	船 z	日 ŋ	以 j
麻	開	2	ʷæ				sia 舍 除			
	開	3	jæ	tsia 赭 柘炙	tsʰia 車			sia 射 76 麝蛇		ia 夜啜野 冶爺
魚	合	3	jɤ	tsiə 渚 tsia 翥	tsʰiə 處 tsiə 杵	siə 墅署 曙薯	siə 鼠 暑黍蜎 恕書鵠	siə 抒	ziə 汝 洳	iə 蕢予蜎 鸞輿 iəi 譽
虞	合	3	jʊɤ	tsu 炷 注鑄 tsiu 主 蛀朱珠	tsʰiu 樞	siu 樹	siu 輪		ziu 乳 孺儒	iu 諭諛榆
祭	開	3	jei			siəi 誓 siə 噬筮	siəi 世 貰			iəi 勸 tʰiəi 靽
		3 B	ʷjei				siəi 稅稅			
	合	3	ʷjei	tsʰiu iəi 贅			iəi 蛻 ⁷⁷			
支	開	3	iɛ	tsi 紙咫 肢枝摺 梔 tsʰi 卮	tsʰi 眵					
	合	3	ʷiɛ	tsʰiu iəi 箠捶	tsʰiu 炊 tsʰiu 吹	si 鋌匙 氏是鼓	si 豕翅 絕 i 弛 ⁷⁸	tiəi 舐 ⁷⁹	zi 爾邇 zʌ 兒	i 匪棼彥
		3 B	ʷyɛ			siu 睡			iəi 藥 ⁸⁰	
脂	開	3	i	tsi 旨指 砥脂敝	tsʰi 痊鴟	si 視 ki 嗜 ⁸¹	si 矢屎 屍鳴		zi 棫二 貳	i 夷姨

⁷⁶ The SK reading of *she* 射 is [s*ia] in YS and TG edition, and [sia] in CJM, YH, NE, SE, SG, JY and SH. Synn (2006:65) notes that the tense consonant [s*] in [s*ia] is derived from the artificial representation of the *chuan* 船 initial, which has the feature [+voice] in MC.

⁷⁷ HD[siəi](popular reading[iəi]), SU,GJ[siəi], OP[siəi](popular reading[iəi])

⁷⁸ YH,SH[i] HD,OP[si](popular reading[i]), SU,GJ[si]

⁷⁹ HD,SU,GJ[si]

⁸⁰ HD[zui](popular reading[iəi])

⁸¹ SE,SG[ki], HD,OP[si](popular reading[ki]), SU,GJ[si]

	合	3	^w i	ts ^h iu 崔 ts ^h io 佳 錐		siu 誰 誰	siu 水		ziu 綏	iu 墮
		3 B	^w y ₁							
之	開	3	i	tsi 址 趾 志 芝	ts ^h i 齒 蚩	si 市 闍 時 蒔 峙	si 詩		zi 耳 珥 餌 珥 輻 輻	i 苡 頤 貽 貽 苜
宵	開	3	iɛu	tsio 照 詔 陞 sio 沼	ts ^h io 麇 thio 弔 ⁸²		sio 燒		io 蕘 ⁸³ zio 橈	io 曜 鷄 窰 瑤 輶 謠 呂
尤	開	3	iu	tsiu 洲 州 舟 ts ^h iu 籌 ts ^h iuk 呪 ⁸⁴	ts ^h iui 醜 臭	siu 受 壽 售 酬 讎	siu 手 狩 獸 收		ziu 菜	iu 牖 莠 誘 柚 游 蚰 油 游 旃
鹽	開	3	iɛm	tsiəm 占 ts ^h iəm 瞻	ts ^h iəm 韃	siəm 蟾	siəm 苦 tsiəm 店 ⁸⁵		ziəm 染 髻 梘	iəm 燄 廢 閭 鹽 艷 ziəm 擱 ⁸⁶ ts ^h iəm 簪 ⁸⁷
葉		3	iɛp				siəp 鞞 攝			iəp 葉
侵	開	3	im	tsim 斟 ts ^h im 枕 鍼	sim 潘 ⁸⁸		sim 孀	sim 甚	zim 衽 荏 鉗 絰 任 妊 nim 恁 稔 ⁸⁹	
緝		3	ip			sip 十				
仙	開	3	iɛn	tsiən 戰 氈 鱣 鸛		siən 善 鱔 蟬 蟬 餽	siən 騙 扇 tsiən 羶			

⁸² SG, HD, SU, GJ[ts^hio]⁸³ SG[io]⁸⁴ HD, SU, GJ[tsu]⁸⁵ HD[tsiəm], GJ[siəm]⁸⁶ TG edition [siəm]⁸⁷ YH[ts^hiəm], HD, OP[iəm](popular reading[ts^hiəm]), SU, GJ[iəm]⁸⁸ HD[sim], OP[ts^him](standard reading [sim]), SU, GJ[ts^him]⁸⁹ HD[zim]SU, GJ[im]

	合	3	^w _i _E _n	tsiən 甌 釧穿川	tshien 喘 簫		siən 船	ziən 蠕 莢楔攔	iən 鳶鉛	
薛	開	3	i _E t	tsiəl 靺			siəl 舌			
	合	3	^w _i _E t	tsiəl 稅			siəl 說	siəl 𤇀 ⁹⁰		
真	開	3	in	tsin 賑 tin 疹 畛		sin 腎蜃 臣晨宸 辰鷄 siun 蜃	sin 晒 身紳娠 伸	sin 神	zin 訃 刃仁人	in 蚓引
質		3	it	tsil 磧 檳 til 蛭 ⁹¹ 桎 ⁹²			sil 室		zil 日	il 溢
諄	合	3	^w _i _n	tsiun 準稔 tun 肫 ⁹³	tsiun 蠱 tshun 春	siun 醇 蓴鶉	siun 薜 瞬	siun 楯盾	ziun 閏	
術			^w _i _t					siul 術 tshul 秫 ⁹⁴		hiul 鵲 ⁹⁵ 繡 ⁹⁶
陽	開	3	iaŋ	tsiaŋ 掌 嶂章獐 tsiaŋ 韓	tshiaŋ 廠 唱菖娼 tsiaŋ 韓	siaŋ 嘗 裳上償	siaŋ 觴 晌賞商 hiaŋ 餉 ⁹⁷		ziaŋ 攘 壤讓 iaŋ 襁 襄瓢	iaŋ 養養 羊陽洋楊 烱
藥	開	3	iak	tsiak 勺 妁繳酌		tsiak 杓 ⁹⁸ siak 芍			ziak 箬 iak 弱 ⁹⁹	iak 籥鑰 躍爍藥
蒸	開	3	iŋ	tsiŋ 證 烝	tshŋ 秤		siŋ 勝 滕升	siŋ 乘 繩		iŋ 孕 siŋ 蠅 ¹⁰⁰
職			ik	tsik 織 職		sik 殖植	sik 飾 式拭	sik 食 蝕		ik 翼弋翌 杙
清		3	i _E ŋ	tsi _E ŋ 政		si _E ŋ 誠	si _E ŋ 聖		piŋ 枵 ¹⁰¹	

⁹⁰ HD[ziəl](popular reading[siəl]), SU,GJ,OP[siəl]⁹¹ YH[til], HD,SU,GJ[tsil]⁹² IG[til], HD,SU,GJ[tsil]⁹³ JY[tsiun]⁹⁴ SU,GJ [siul], HD,OP[siul](popular reading[tshul])⁹⁵ HD[hiul], OP[iul](popular reading[hiul]),SU,GJ[iul]⁹⁶ SU,GJ[iul]⁹⁷ HD[siaŋ](popular reading[hiaŋ]), YH,SE[hiaŋ], OP[siaŋ](popular reading[hiaŋ])⁹⁸ TG edition [siak], HD[tsiak]⁹⁹ TG edition [ziak]¹⁰⁰ YH,SG[siŋ] , HD,OP[iŋ](popular reading[siŋ]), SU,GJ[iŋ]¹⁰¹ HD[iEŋ], SU,GJ[iEŋ], OP[iEŋ](standard reading [iEŋ])

	開			鉦鉦		城盛箴	聲			iəŋ 贏楹
	合	3	^w i _E ŋ							iəŋ 穎營
昔	開	3	iek	tsiək 炙 ts ^h iək 隻	ts ^h iək 尺斥𧈧 tsiək 赤	siək 石 鉈	siək 螫			ɬik 液腋 hiək 奔 ¹⁰² iək 易繹 驛 t ^h iək 蜴 ¹⁰³
	合	3	^w i _E k							iək 役 疫疫
東	合	3	juŋ	tsioŋ 終 蠱	ts ^h iuŋ 銃 荒				ziuŋ 戎	
屋	合	3	juk	tsiuk 粥		siuk 熟 孰淑塾	siuk 叔 菽		ziuk 肉	iuk 育鬻 毓
鍾	合	3	juoŋ ŋ	tsioŋ 種 腫踵種 鐘鍾			sioŋ 春 tsoaŋ 驢 ¹⁰⁴			ioŋ 勇涌 蛹踴捅容 傭鎔墉
燭	合	3	juo k		ts ^h ioŋ 觸 燭			siok 贖	ziok 褥	iok 浴谷
Summary				[ts]:80 [ts ^h]:13	[ts ^h]:34 [ts]:1 [s]:1 [t ^h]:1	[s]:62 [ts]:1 [ts ^h]:2 [k]:1	[s]:60 [ts]:3 [ø]:2 [h]:1	[s]:16 [t]:1 [t ^h]:1	[z]:47 [ø]:8	[ø]:98 [h]:3[z]:1 [s]:1[p]:1 [t ^h]:1 [ts ^h]:1

The *zhang* 章 initial is mainly represented as [ts] or [ts^h] in *HMJH*. The exceptional representations that result from analogy are listed as follows: 鈍(定[d] initial)>肫[tun], 召(禪[dz] initial)>沼[sio]. Lee Dukchun (1985:38) proposes that the reading of 疹疹[tin] is a reflection of Old Chinese, in which the *zhang* 章 initial was dental. Lee's proposal is

¹⁰² *YH, HD*[hiək], *OP*[iək](standard reading[hiək]), *SU, GJ*[iək]

¹⁰³ *HD, OP*[iək](popular reading[t^hiək]), *SG*[siək], *SU, GJ*[iək].

¹⁰⁴ *SU, GJ*[sioŋ], *HD, OP*[sioŋ](popular reading[tsoaŋ])

reasonable, but it is necessary to point out that the reading of 疹疹[tin] could be a result of analogy: 疹(澄 initial)> 疹疹[tin].

The *chang* 昌 initial is represented as [ts^h] or [ts] in *HMJH* except the following representations that are derived from analogy: 迢(定 initial)> 迢[t^hio], 審(書 initial)> 瀋[sim].

The *chan* 禪 initial is represented as [s] in *HMJH* except the following representations that are derived from analogy: 鰭(群[g] initial)> 嗜[ki], 喘(昌[tɕ^h] initial) > 喘[tɕ^hiən], 酌(章[tɕ] initial)> 杓[tsiak].

The *shu* 書 initial is represented as [s] in *HMJH*. The exceptional representations that result from analogy are listed as follows: 占(章[tɕ] initial)> 店[tsiəm], 銳(以[j] initial)> 蛻[iəi], 向(曉[h] initial)> 餉[hian], 饅飪(章[tɕ] initial)> 羶[tsiən]. The reading of *chi* 弛 in *HMJH* is [i]. There are three *fanqie* spellings for *chi* 弛 in *Jiyun* 集韻, namely *shangshi* 賞是, *chouzhi* 丑豸 and *yuzhi* 余支. The reading of 弛 [i] is consistent with the *yuzhi* 余支 *fanqie* spelling.

The *chuan* 船 initial is represented as [s] in *HMJH* except in the cases of 舐 [tiəi] and 秫 [t^hiul], which are derived from analogy: 抵低(端[d] initial)> 舐[tiəi], 茱(澄[d] initial)> 秫[t^hiul].

The *ri* 日 initial is generally represented as [z] in *HMJH*. The zero-initial representation is a reflection of the disappearance of the ʌ[z] initial in Middle Korean. The exceptional representations that derived from analogy are listed as follows: 褻褻(心[s] initial)> 𤑔[siəl]. The representation of *nen* 慚 is [nim] in *HMJH*. There are four

fanqie spellings for *nen* 慚 in *Jiyun*, namely *renshen* 忍甚, *ruzhen* 如鴛, *rulin* 如林 and *nixin* 尼心. The reading [nim] is consistent with the *nixin* 尼心 *fanqie*.

The *yi* 以 initial is represented as the zero initial in *HMJH*. The exceptional representations that derived from analogy include: 曉(曉[h] initial)> 鷗繡[hiul], 繩(船[z] initial)> 蠅[sin], 蟾(昌[te^h] initial)> 簪[ts^hiəm], 剔(透[t^h] initial)> 蜴 [t^hiək], 爛(邪(z) initial) > 攔[ziəm], 聘(滂[p^h] initial) > 栲 [piŋ], 滯(澄[d] initial) > 韃[t^hiəi].

3.10 Summary

Based on the above discussion, the mainstream representation of Middle SK initials can be summarized as below.

(11)

	Initial	<i>Qieyun</i>	Late MC	Middle SK
Group 幫 (Bilabials)	幫	p	p	p, p ^h
	滂	p ^h	p ^h	p, p ^h
	並	b	b	p, p ^h
	明	m	m	m
Group 非 (Labial-dentals)	非	p	f	p, p ^h
	敷	p ^h	f ^h	p, p ^h
	奉	b	v	p, p ^h
	微	m	ɱ	m
Group 見 (Velars)	見	k	k	k
	溪	k ^h	k ^h	k
	群	g	g	k
	疑	ŋ	ŋ	∅

Group 影 (Gutturals)	影	ʔ	ʔ	ø
	曉	h	h	h
	匣	ɦ	ɦ	h
	云	ɦ	ø	ø
Group 端 (Alveolar stops, lateral, and nasal)	端	t	t	t, t ^h
	透	t ^h	t ^h	t ^h , t
	定	d	d	t, t ^h
	泥	n	n	n
	來	l	l	l
Group 精 (Alveolar fricatives, and affricates)	精	ts	ts	ts, ts ^h
	清	ts ^h	ts ^h	ts ^h , ts
	從	dz	dz	ts, ts ^h
	心	s	s	s
	邪	z	z	s
Group 知 (Retroflex stops, and nasals)	知	ʈ	ʈ	t, t ^h
	徹	ʈ ^h	ʈ ^h	t ^h , t
	澄	ɖ	ɖ	t, t ^h
	娘	ɳ	ɳ	n
Group 莊 (Retroflex fricatives, and affricates)	莊	tʂ	tʂ	ts, ts ^h
	初	tʂ ^h	tʂ ^h	ts ^h
	崇	ɖʂ	ɖʂ	s, ts, ts ^h
	生	ʂ	ʂ	s
Group 章(Palatal fricatives, and affricates)	章	tɕ	tɕ	ts, ts ^h
	昌	tɕ ^h	tɕ ^h	ts ^h
	禪	dʒ	dʒ	s
	書	ɕ	ɕ	s
	船	ʐ	ʐ	s

	日	ŋ	z	z
	以	j	ø	ø

As can be seen from the table above, due to the mismatch in the phonemic inventory between Chinese and Korean, some of those different initials in MC are represented as the same type in SK. For example, the voiced initials in MC are generally represented as voiceless. However, it should be noted that the *ri* 日 initial is represented as voiced [z] in Middle SK. According to Lee (1997:43), the *ri* initial was adapted as [j] in Korean first and later this [j] changed to [z]. The *yi* 疑, *ying* 影, *yun* 云 initial and the *yi* 以 initial are represented as a zero-initial. The *zhuang* 莊 series (retroflex affricates and fricatives), the *zhang* 章 series (palatal affricates and fricatives), and the *jing* 精 series (alveolar affricates and fricatives) are represented as one type, namely alveolar affricates and fricatives.

One of the intriguing questions about the initial system in *HMJH* is the aspiration assignment since it is not consistent with MC. None of the following factors, including rhyme, roundness, division or tone in Chinese can become the criterion of aspiration assignment in *HMJH*. The following chart shows that two characters with exactly the same phonetic form in MC are represented in *HMJH* differently in terms of aspiration. Therefore, the assignment of aspiration is not related to the source form in MC.

(12)

Initial	Character	Rhyme group	Rhyme	<i>Kaihe</i>	Division	Tone	<i>Qieyun</i>	<i>HMJH</i>
定	臺	蟹	哈	<i>kaikou</i>	1	<i>ping</i>	dəi	tai

定	苔	蟹	哈	<i>kaikou</i>	1	<i>ping</i>	dəi	tʰɿ
定	怠	蟹	哈	<i>kaikou</i>	1	<i>shang</i>	dəi	tʰɿ
定	袋	蟹	哈	<i>kaikou</i>	1	<i>shang</i>	dəi	tɿ
定	涕	蟹	齊	<i>kaikou</i>	4	<i>qu</i>	dei	tɿəi
定	髭	蟹	齊	<i>kaikou</i>	4	<i>qu</i>	dei	tʰɿəi
定	頭	流	侯	<i>kaikou</i>	1	<i>ping</i>	du	tu
定	骰	流	侯	<i>kaikou</i>	1	<i>ping</i>	du	tʰu
精	睫	咸	葉	<i>kaikou</i>	3	<i>ru</i>	tsyɿɐp	tsʰiɐp
精	接	咸	葉	<i>kaikou</i>	3	<i>ru</i>	tsyɿɐp	tsiɐp
精	脊	梗	昔	<i>kaikou</i>	3	<i>ru</i>	tsiɛk	tsʰiɛk
精	跡	梗	昔	<i>kaikou</i>	3	<i>ru</i>	tsiɛk	tsiɛk

The following table suggests that the assignment of aspiration is related to the analogy based on phonetic components. Characters that share the same phonetic component tend to be assigned the same value of aspiration.

(13)

Phonetic component	<i>HMJH</i>	The initials of these characters in <i>Qieyun</i>
皮	p ^h a 簸波菠, p ^h i 彼陂	p
	p ^h a 坡, p ^h i 鉞	p ^h
	p ^h a 婆婆櫛, p ^h i 被鞞髮疲皮	b
包	p ^h o 飽苞	p
	p ^h o 砲泡	p ^h
	p ^h o 庖庖匏咆炮跑麇匏匏	b
番	pən 藩	p

	pən 潘 幡 幡	p ^h
	pan 燐	b

It is worth noting that in *HMJH* there is no single character being represented as [pa]. If we examine the syllable type of [p] and [p^h] initial in *HMJH*, we can find [p] and [p^h] has a preference for the rhyme they combine with.

(14)

	a	ai	al	an	aŋ	ak	ən	u	un	um
p	—	—	pal	pan	paŋ	pak	pən	pu	pun	—
p ^h	p ^h a	p ^h ai	p ^h al	p ^h an	—	—	—	p ^h u	—	p ^h um
	i	ik	iŋ	o	oŋ	ok	li	l	liŋ	lik
p	pi	pik	piŋ	po	poŋ	pok	pɿ	pɿ		pɿik
p ^h	—	—	—	p ^h o	—	—	—	—	p ^h liŋ	—
	i	io	il	iəi	iən	iəŋ	iək	iəl	ip	—
p	pi	—	—	—	piən	—	piək	piəl	p ^h ip	—
p ^h	p ^h i	p ^h io	p ^h il	p ^h iəi	p ^h iən	p ^h iəŋ	—	—	—	—

[p] and [p^h] can only appear before the rhyme in the following six types: [al], [an], [u], [o], [i] and [iən]. For the other syllable types, only one form, either [p] or [p^h], is allowed. This shows that most rhymes have a preference for [p] or [p^h] in *HMJH*. It is unreasonable to claim that syllable type [pa] did not exist in the phonotactic inventory in Middle Korean. Thus, the gap in these syllable types shows the simplification in the assignment of aspiration feature. Kōno (1979) proposes that this simplification results from pursuing the convenience of memorizing the pronunciation. This is a possible

explanation; however, it is still not clear what causes a particular syllable tends to be represented as aspirated or unaspirated.

Since the aim of this study is to examine the origin of SK, we are particularly interested in those features in SK which can give us a hint regarding its origin. The following features in Middle SK, including no distinction between group *bang* 幫 (bilabials) and group *fei* 非 (labiodentals), no distinction between group *zhi* 知 (retroflex stops and nasal) and group *duan* 端 (alveolar stops and nasal), the *ri* 日 initial being represented as [z], the *yun* 云 initial being represented as zero-initial, can provide us a clue about the origin of Modern SK. We will provide a detailed discussion on these features in Chapter 6.

Chapter 4 The Rhyme System of Middle Sino-Korean

This chapter will compare the rhyme system in Middle Chinese and that in Middle Sino-Korean. The rhyme system of MC will be introduced base on *Qieyun*. The rhyme system of Middle Sino-Korean will be introduced mainly based on *Hunmong jahoe* (YS edition). In order to provide a more comprehensive understanding of the rhyme system in MiSK, for those non-mainstream representations, the phonetic notations in other sources will be given in the footnote for reference.

The rhymes of Middle Chinese are always gathered into 16 *she* 摄 (rhyming group), namely, 果假遇蟹止效流咸深山臻宕江曾梗通, according to principal vowel and coda. In this study the discussion will follow the order of these 16 rhyming groups. In each comparison chart, the information about *kaihe* "labial roundness" and *deng* "division" will be provided in the first line, reconstructed phonetic value in Pan and Zhang (2013) will be provided in the second line, and the representation in *HMJH* in the third line. It should be noted that besides the normal first, second, third and fourth division, there are also 3A and 3B divisions. The 3A and 3B divisions are used to indicate the *chongniu* 重鈕 "rime doublets" in MC, which refers to the fact that there are two different *fanqie* spellings in *Qieyun* under certain rhymes. *Chongniu* only occur in the labial, velar or glottal initial of the following eight rhymes: *zhi* 支, *zhi* 脂, *xiao* 宵, *ji* 祭, *xian* 仙, *yan* 鹽, *zhen* 真 and *qin* 侵. In rhyme tables they are placed in the 3rd and 4th division respectively. Traditionally those which are placed at 4th division are called 3A division, and those which are placed at 3rd division are called 3B division.

4.1 Guo 果 rhyme group

(1)

		<i>kaikou</i> ¹⁰⁵ div.1 歌		<i>hekou</i> div.1 戈			<i>hekou</i> div.3 戈	
	<i>Qieyun</i>	[a]		[wɑ]			[wia]	
	<i>HMJH</i>	a	oa	oa	a	o	oa	a
幫	p				p ^h a 簸波菠			
滂	p ^h				p ^h a 坡			
並	b				p ^h a 婆婆懶			
明	m				ma 魔磨磨			
見	k	a 歌柯哥		koa 菓戈喆 鍋鍋				
溪	k ^h	ka 珂		koa 課騾科 蝌窠				
群	g							ka 癩
疑	ŋ	a 我餓蛾驚 ha 蘭		oa 臥				
影	ʔ	a 阿		oa 渦倭窩 蒿				
曉	h			hoa 火貨			hoa 靴	
匣	ɦ	ha 河荷鮓		hoa 禾				
端	t				t ^h a 睡			
透	t ^h	t ^h a 他			t ^h a 唾			
定	d	ta 爹 t ^h a 駝 舵馱跚			t ^h a 惰綠			
泥	n	na 挪			na 懦糯掇			
來	l	la 羅蘿籬籬			la 裸蓆療 螺稷	lo 騾 ¹⁰⁶		
精	ʈs		tsoa 左 ¹⁰⁷					
清	ʈs ^h	tʂa 搓						

¹⁰⁵ In this study the description on the *kaikou* and *hekou* follows the book *Fangyan diaocha zibiao* 方言調查字表 [Questionnaire of characters for dialect survey].

¹⁰⁶ *CJM*[lo], *YH*, *HD*, *SU*, *GJ* [la]

¹⁰⁷ *YH*, *CJM*, *SE*, *JG* [tsoa], *NE*, *SG*, *JY*, *HD*, *SU*, *GJ* [tsa].

從	ɗ	tsa 𪛗咱 ¹⁰⁸		tsoa 坐𪛗	ts ^h a 𪛗			
心	s	sa 抄		soa 鎖	sa 梭 ¹⁰⁹ 蓑 ₁₁₀			

The *ge* 歌 rhyme (*kaikou* div.1) is represented as [a] in *HMJH* except in the case of 左 [tsoa]. *Ge* 戈 [ʷa] rhyme (*hekou* div.1) is represented as [a] or [oa] generally according to the articulation place of the initials. For labial initials, the [ʷa] is represented as [a]. This is consistent with the fact that there is no roundness contrast in labial position in the *Qieyun*, in which both *kaikou* initial characters and *hekou* initial characters can serve as the lower character of *fanqie* for labial initial characters. For velars and gutturals, the [ʷa] is represented as [oa]. For alveolars, laterals and nasals, div.1 戈 [ʷa] is represented as [a]. For alveolar fricative and affricate initials, both [oa] and [a] can be found. *Luo* 騾 [lo] is probably a reflection of the Chinese pronunciation [luo] in Old Mandarin (Lee Yundong 1997:139). The *ge* 戈 rhyme (*hekou* div.3) is represented as [oa]. The reading of 癩[kɑ] in *HMJH* probably results from the analogy of 加 [ka] (Pak 1971:121). Kōno (1979:427) states that 左[tsoa] may be a reflection of the sound change of [tsa] to [tsuə] in the transition period from Middle Chinese to Old Mandarin. Lee Donju (1980:125) states that the [tsoa] reading is derived from the influence of Old Mandarin. However, the reading of [tsa] underwent the following change from Middle Chinese to Modern Chinese: [tsa]>[tsɔ]>[tso]>[tsuo]>[tsuə] (Wang Li 1985). If the [o] in [tsoa] is from the influence of Old Mandarin, then the adapted form in *HMJH* should had been [tsuə], but not [tsoa].

¹⁰⁸ Also [tsam] in *HMJH*.

¹⁰⁹ *YH*[sa]

¹¹⁰ *SG*[sa]

4.2 *Jia* 假 rhyme group

(2)

		<i>kaikou</i> div.2 麻		<i>hekou</i> div.2 麻	<i>kaikou</i> div.3 麻	
	<i>Qieyun</i>	^y æ		^w æ	iæ	
	<i>HMJH</i>	a	ai, ia	oa	ia	iə
幫	p	p ^h a 弮𪔐𪔐𪔐𪔐 疤	p ^h ai 𪔐 ₁₁₁			
滂	p ^h	p ^h a 帕𪔐𪔐肥				
並	b	p ^h a 𪔐𪔐爬				
明	m	ma 瑪𪔐馬罵麻 𪔐 ma 媽				
見	k	ka 𪔐𪔐假家袈茄 枷𪔐𪔐𪔐𪔐		koa 寡𪔐𪔐		
溪	k ^h			koa 𪔐𪔐𪔐		
疑	ŋ	a 𪔐𪔐𪔐𪔐		oa 瓦𪔐		
影	ʔ	a 𪔐𪔐		oa 蛙𪔐𪔐		
曉	h	ha 𪔐		hoa 化𪔐花		
匣	ɦ	ha 下𪔐𪔐𪔐𪔐 𪔐 𪔐𪔐		koa 𪔐 hoa 華𪔐		
知	t	t ^h a 打		tsoa 𪔐		
澄	ɖ	ta 茶 ts ^h a 𪔐				
精	ts				ts ^h ia 借	tsiə 姐 ₁₁₂ tsiə 𪔐 ₁₁₃
從	ɖz				tsia 𪔐	
心	s				sia 𪔐寫𪔐𪔐	
邪	z				sia 斜	
莊	tʂ	tʂa 𪔐𪔐炸𪔐𪔐	tsia 𪔐 ₁₁₄			

¹¹¹ *SU, GJ, HD*[p^ha]¹¹² *SU, GJ, HD*[tsia]¹¹³ *SU, GJ, HD*[ts^hia]¹¹⁴ *JGG* edition of *HMJH*: [tsa], *SU, GJ*[tsa]

		sa 詐渣 ts ^h a 魴瘡				
初	tɕ ^h	ts ^h a 岔汉杈杈叉				
崇	dz	sa 槎				
生	ɕ	sa 沙裛紗鯨		soa 耍		
章	tɕ				tsia 赭柘炙	
昌	tɕ ^h				ts ^h ia 車	
書	ɕ				sia 舍賒	
船	z				sia 射麝蛇	
以	j				ia 夜啜野冶 爺	

The *ma* 麻 rhyme (*kaikou* div.2) and the *ma* 麻 rhyme (*hekou* div.2) are represented as [a] and [oa] respectively. The reading of *ba* 壩 is [p^hai] in *HMJH* and [p^ha] in *SU*, *GJ* and *HD*. Lee (1997:141) proposes that the reading of 壩 [p^hai] could be a borrowing from Old Chinese or a result of the analogy of 霸 [p^hai]. *Zha* 楂 is represented as [tsia] in the *YS* edition *HMJH*, but as [tsa] in *JGG* edition *HMJH*. The *ma* 麻 rhyme (*kaikou* div.3) is represented as [ia] except in the cases of 姐置 [tsiə], which are probably a result of the analogy of 且 [tsiə] (Lee 1997:142, Ito 2007:118).

4.3 *Yu* 遇 rhyme group

4.3.1 *Mu* 模 rhyme

(3)

		<i>hekou</i> div.1			
	<i>Qieyun</i>	[ɤo]			
	<i>HMJH</i>	o	u	io,oi	oi

幫	p	po 圃 p ^h o 布哺			
滂	p ^h	po 浦	p ^h u 鋪 ¹¹⁵		
並	b	po 捕步𨔵𨔵 p ^h o 哺𨔵蒲葡捕	pu 簿 ¹¹⁶ 埠		
明	m	mo 姥暮模縻		mio 墓 ¹¹⁷	
見	k	ko 顧雇鋼孤沽辜姑箍姑古拈菇			
溪	k ^h	ko 苦庫袴枯			
疑	ŋ	o 五伍寤悟晤吾蜈鰕朽		io 梧 ¹¹⁸	
影	ʔ	o 烏沓葛			
曉	h	ho 琥庠虎呼			
匣	ɦ	ho 戶帛篋𨔵狐瑚壺猢湖弧糊筍衡鬚 𨔵𨔵			
端	t	to 賭覩都	tu 蠹 ¹¹⁹		
透	t ^h	t ^h o 土吐菟兔			
定	d	to 鍍度屠徒途圖	tu 肚 ¹²⁰		
泥	n	no 弩奴			
來	l	lo 櫓虜滷輅鷺路露鱸蘆轆顱鱸鱸鷓 𨔵𨔵𨔵 no 𨔵			loi 賂 ¹²¹
精	ts	tso 祖租			
清	ts ^h	ts ^h o 醋			
從	dz	tso 祚			
心	s	so 訴素塑蘇酥𨔵			

The *mu* 模 rhyme is generally represented as [o]. In the following characters, *mu* rhyme is represented as [u]: 簿[pu], 埠[pu], 肚[tu], 鋪[p^hu] and 蠹[tu]. The [u] representation is probably borrowed from the Chinese pronunciation in Old Mandarin (Lee

¹¹⁵ YH, SU, GJ [p^ho], HD [p^hu]

¹¹⁶ SU, GJ, HD [pu]

¹¹⁷ YH, SU, GJ, SG, SE [mio], HD [mu]

¹¹⁸ TG, JGG, NG, GJG, DG edition of HMJH[o], YH, CJM, HD, SU, GJ[o]

¹¹⁹ YH, SE, SG [tu]

¹²⁰ SG [tu]

¹²¹ HD, SU, GJ [lo], YP, SG [loi]

Donju1980:129, Lee Yundong 1997:249). The [i] coda in 賂[loi] could be a reflection of Old Chinese when the coda [g] changed to [i] (Lee 1997:249), or is derived from the analogy of 賄[hoi], which is semantically close to 賂[loi] (Ito 2007:124).

4.3.2 Yu 魚 rhyme

(4)

		<i>hekou</i> div.3			
	<i>Qieyun</i>	[iɿ]			
	<i>HMJH</i>	iə	ə	o	əi, iəi, iu,ia
見	k		kə 鋸距車居𨮒 踞		kəi 筥 ¹²²
溪	k ^h		kə 祛		
群	g		kə 炬苴距蓼渠 蕖鵒		
疑	ŋ		ə 圖御語馭魚 漁		
影	ʔ		ə 飫		
來	l	liə 侶膂旅瀘鑪間廬驢			
知	t	tiə 潞			tiəi 豬 ¹²³
徹	t ^h	tiə 楮樗擣			
澄	ɖ	tiə 苧杼筯儲			
娘	ɳ	niə 女			
精	ts	tsiə 蛆			
清	ts ^h	tsiə 疽沮鴟			
從	ɗ				tsiu 𩚑
心	s	siə 絮			
邪	z	siə 嶼芋序漱			

¹²² HD,SU,GJ[kə].

¹²³ YH[tiə],SU,GJ,HD[tsiə].

莊	tʂ			tso 菹 ¹²⁴	
初	tʂʰ			tsʰo 礎	
崇	dʒ		sə 鋤 ¹²⁵		
生	ʂ			so 所疏蔬梳	
章	tʂ	tsiə 渚			tsia 煮 ¹²⁶ 翥 ¹²⁷
昌	tʂʰ	tsʰiə 處 tsiə 杵			
禪	dʒ	siə 墅署曙薯			
書	ʂ	siə 鼠暑黍蜎恕書鵠			
船	ʒ	siə 杼			
日	ʐ	ziə 汝洳			
以	j	iə 蘋予蜎鸞輿			iəi 譽 ¹²⁸

The *yu* 魚 rhyme is generally represented as [ə] when the initial is velar or guttural, [o] when the initial is retroflex fricative or affricate, and [iə] elsewhere. The readings that derived from analogy include 者>煮翥[tsia]. The *yu* rhyme is mainly represented as [o] when the initial belongs to the *zhuang* 莊 series. This [o] is explained as a reflection of the [iō] in Old Chinese in Pak (1971) and Lee (1997), but as a borrowing of Old Mandarin in Arisaka (1944) and Kōno (1979). However, this [o] may not derive from different layers of borrowing, but could be a result of adjustment in the process of adaptation. Due to the influence of the *zhuang* initials, which are retroflexes, the main vowel of *yu* rhyme become more back and rounded, and thus borrowers tend to use [o],

¹²⁴ MoSK [tʂə]

¹²⁵ YH[sə], SU,GJ[tso], HD [tsu] (popular reading[tso])

¹²⁶ HD[tsiə] (popular reading [tsia]), SU,GJ[tsiə]

¹²⁷ HD,SU,GJ[tsiə]

¹²⁸ HD,SU,GJ[iə].

which has [+back] and [+round] feature, to transcribe this sound. The reading of 鋤 [sə] is a reflection of the dropping of glide [j] after [ts], [ts^h] and [s] in Late Middle Korean.

4.3.3 Yu 虞 rhyme

(5)

		<i>hekou</i> div.3			
	<i>Qieyun</i>	[i̯u̯]			
	<i>HMJH</i>	u	iu	iui	o
非	f	pu 府俯斧賦傅夫膚附拊			p ^h o 脯
敷	f ^h	pu 俘郛𪔐稊享筭 mu 撫			
奉	v	pu 父腐釜𩚑𩚑符芙鳧			po 輔
微	ɱ	mu 鵠武舞廡務霧巫誣			
見	k	ku 句駒	kiu 𪔐 ¹²⁹		
溪	k ^h	ku 軀驅			
群	g	ku 衢癯臞蠅			
疑	ŋ	u 愚			
影	ʔ	ku 嫗			
曉	h	hu 醕			
云	ɦ	u 羽雨宇芋孟栩			
來	l	lu 縷褸			
知	t		tiu 拄株蛛		
澄	d		tiu 柱𪔐廚		
精	ts			ts ^h iui 𪔐 ¹³⁰	
心	s		siu 鬚		
初	tɕ ^h	ts ^h u 𪔐			

¹²⁹ *SU, GJ*[ku].

¹³⁰ *HD, SU, GJ*[ts^hiu].

崇	dz _l	ts ^h u 雛			
章	tɕ	tsu 炷注鑄	tsiu 主蛀朱珠		
昌	tɕ ^h		ts ^h iu 樞		
禪	dz		siu 樹		
書	ɕ		siu 輸		
日	ɳ		ziu 乳孺儒		
以	j		iu 諭諛榆		

The *yu* 虞 rhyme is generally represented as [u] when the initial is labial, velar, guttural, lateral or retroflex fricative/affricate, and [iu] elsewhere. The [u] reading of the *yu* 虞 rhyme for the [ts] initial is a reflection of the dropping of glide [j] after [ts], [ts^h] and [s] in Late Middle Korean. The readings that derived from wrong analogy include 捕浦>輔 [po], 哺哺酺>脯[p^ho].

4.3.4 Summary

Below is a summary of the representative reading of the *yu* 遇 rhyme group in Middle Sino-Korean.

(15)

	模	魚			虞	
<i>Qieyun</i>	uo	jɤ			juo	
<i>HMJH</i>		other	velar guttural	retroflex fricative/affricate	other	labial, velar guttural
	o	iə	ə	o	iu	u

4.4 *Xie* 蟹 rhyme group4.4.1 *Hai* 哈 rhyme

(6)

		<i>kaikou</i> div.1			
	<i>Qieyun</i>	əi			
	<i>HMJH</i>	Λi	ai	oi	ii
見	k	hΛi 菱	kai 概		
溪	k ^h	hΛi 咳 kΛi 開	kai 鎧		
影	ʔ	Λi 愛	ai 埃		
曉	h	hΛi 海醢			
匣	ɦ	hΛi 孩頰			
端	t	tΛi 戴	tai 歹		
透	t ^h	tΛi 貸 t ^h Λi 態			
定	d	t ^h Λi 怠苔咎殆 tΛi 袋黛代玳擡臺			
泥	n		nai 鼐		
來	l	lΛi 萊		loi 賚 ¹³¹	
精	ts	tsΛi 宰穀載栽			
清	ts ^h	ts ^h Λi 綵菜			
從	ɗz	tsΛi 裁財才			
心	s	sΛi 塞賽			sii 頤 ¹³²

¹³¹ *YH,SG,SU,GJ*[loi], *HD*[lΛi] (popular reading[loi]).¹³² *HD* [sai] (popular reading[sii]), *GJ*[sΛi]

The *hai* 哈 rhyme is generally represented as [Λi]. In the following four characters the *hai* rhyme is represented as [ai]: 概 [kai], 鎧 [kai], 鼐 [nai] and 歹 [tai]. In *YS* edition *HMJH* the notation for 埃 [ai] states that "the standard reading of *ai* 埃 is [Λi]". The [ai] reading of *hai* 哈 rhyme is a reflection of the sound change of [Λ] to [a] in Middle Korean. The reading of 賚 [loi] may derived from the analogy of 賂 [loi], which is close to 賚 [loi] semantically (Kōno 1979). The reading of 顗 [sii] may be derived from the analogy of *zhi* 之 rhyme character 偲 總 [sii] (Ito 2007:133).

4.4.2 Hui 灰 rhyme

(7)

		<i>hekou</i> div.1		
	<i>Qieyun</i>	uoi		
	<i>HMJH</i>	Λi	oi	ai, ui, i, iu
幫	p	pΛi 背輩杯		
滂	p ^h	pΛi 坯醅		
並	b	pΛi 焙培陪		p ^h ai 佩 ¹³³
明	m	mΛi 每妹昧莓黴 梅媒煤每莓酶		
溪	k ^h		koi 傀塊	
疑	ŋ			ïi 磴 ¹³⁴ ui 桅 ¹³⁵
影	ʔ		oi 櫻猥煨	
曉	h		hoi 賄誨灰晦	
匣	ɦ		koi 槐 hoi 茴	
端	t	tΛi 碓對 ¹³⁶	t ^h oi 鎚	

¹³³ *YH, SU, GJ, SG*[p^hai], *HD*[p^hΛi]

¹³⁴ *SU, GJ, HD*[Λi]

¹³⁵ *SU, GJ, HD*[oi]

¹³⁶ *YH, CJM, SU, GJ, HD*[tΛi]

透	t ^h		t ^h oi 腿退蕤腿	
定	d		t ^h oi 頹癘	
泥	n	nΛi 內 ¹³⁷	noi 餒	
來	l	lΛi 未 ¹³⁸	loi 儼播雷疊	
從	dz		tsoi 罪	
清	ts ^h			siu 燂 ¹³⁹

The *hui* 灰 rhyme is generally represented as [Λi] when the initial is labial, and [oi] elsewhere. Both forms can be found when the initial is alveolar. The readings that derived from analogy include 危(支 rhyme) > 桅 [ui], 粹(脂 rhyme) > 燂[siu], 蠅(支 rhyme) > 磴[iɪ]. The reading of 佩 [p^hai] is a reflection of the sound change [Λ]>[a] in Middle Korean.

4.4.3 *Tai* 泰 rhyme

(8)

		<i>kaikou</i> div.1			<i>hekou</i> div.1
	<i>Qieyun</i>	ai			^w ai
	<i>HMJH</i>	ai	Λi	oi	oi
幫	p	p ^h ai 貝			
見	k	kai 蓋			hoi 儼膾檜
疑	ŋ	ai 艾			oi 外
匣	ɦ				hoi 繪
端	t		tΛi 帶 ¹⁴⁰		
透	t ^h	t ^h ai 汰			

¹³⁷ *YH, CJM, SU, GJ, HD*[nΛi]

¹³⁸ *TG* edition [loi]

¹³⁹ *HD*[siui]

¹⁴⁰ *YH, CJM, SU, GJ*[tΛi], *HD*[tai]

定	d	tʰai 鈇			
泥	n	nai 奈			
來	l			loi 癩 ¹⁴¹ 瀨 ¹⁴²	

The *tai* 泰 rhyme (*kaikou* div.1) and the *tai* 泰 rhyme (*hekou* div.1) are represented as [ai] and [oi] respectively. The reading of 癩瀨[loi] can be explained by misperception. In other words, the vowel of *tai* 泰 rhyme is perceived to take the [+labial roundness] feature when the initial is *lai* 來, which is a lateral sound (Ito 2007:133).

4.4.4 *Jie* 皆 rhyme

(9)

		<i>kaikou</i> div.2				<i>hekou</i> div.2
	<i>Qieyun</i>	[^v ei]				[^{wv} ei]
	<i>HMJH</i>	Λi	ai	iəi	ii	uəi, oi
幫	p	pΛi 排拜	p ^h ai 鞞		p ^h ii 憊 ¹⁴³	
明	m	mΛi 霾				
見	k	kΛi 楷 hΛi 痄	kai 芥介芥峴	kiəi 界 ¹⁴⁴ 階 ¹⁴⁵ 楷		
溪	k ^h	kΛi 揩				
疑	ŋ		ai 駢			huəi/koi 贖 ¹⁴⁶
影	ʔ		ai 噫挨			

¹⁴¹ *HD*[lai]

¹⁴² *HD*[lai]

¹⁴³ *HD, SU, GJ*[pΛi]

¹⁴⁴ *YH, HD, SU, GJ* [kiəi]

¹⁴⁵ *YH* [kiəi], *HD*[kΛi](popular reading[kie]), *SU, GJ*[kΛi]

¹⁴⁶ *HD*[hoi], *SU, GJ*[oi]

匣	ɦ	ɦɿ 骸		hiɿ 薤 ¹⁴⁷		
莊	tʂ	tsɿ 齋				
崇	dʒ			tsiɿ 儕 ¹⁴⁸	sii 豺 ¹⁴⁹	

The *jie* 皆 rhyme (*kaikou* div.2) is generally represented as [ɿ], [ai] or [iɿ]. The [ai] reading for *jie* 皆 rhyme is a reflection of the merging of [ʌ] and [a] in Late Middle Korean. The readings that derived from analogy include 備(脂 rhyme) > 憊[pɿi], 齊(齊 rhyme) > 儕[tsiɿ]. The [iɿ] reading for velar initial characters may result from palatalization (Pak 1975:138), or the influence of Old Mandarin (Kōno 1979, Lee 1997). The reading of 豺[sii] may have derived from the analogy of *zhi* 紙 rhyme character 豸[sii] (Pak 1975:138), or the influence of Old Chinese (Lee 1997:175). The only *jie* 皆 rhyme (*hekou* div.2) character in *HMJH*, *kui* 瞶, is represented as [huɿ] and [koi] in *YS* edition *HMJH*, and [koi] in *DD*, *JGG*, *NG*, *GJG* and *DG* edition. Here lists the representation of a few *hekou jie* 皆 rhyme characters in other books for reference. 怪: *YH*, *SU*, *GJ*, *HD* [koi], 壞: *YH*, *HD* [koi], *SU*, *GJ* [hoi], 懷: *SU*, *GJ* [hoi]. This shows that the comprehensive reading of *hekou jie* 皆 rhyme is [oi] in Middle SK.

4.4.5 *Jia* 佳 rhyme

(10)

		<i>kaikou</i> div.2	<i>hekou</i> div.2
	<i>Qieyun</i>	[ʷɛ]	ʷɛ

¹⁴⁷ *YH*, *HD*, *SU*, *GJ* [ɦɿ]

¹⁴⁸ *HD* [tsɿ] (popular reading [tsiɿ]), *SU*, *GJ* [tsɿ]

¹⁴⁹ *HD* [sai] (popular reading [sii]), *SU*, *GJ* [tsɿ]

	<i>HMJH</i>	ai	Λi	iəi	a, ii, Λik	oai	oi	oa
滂	p ^h	p ^h ai 派						
並	b	p ^h ai 稗 牌簿						
明	m	mai 賣	mΛi 買 賈					
見	k	kai 街	hΛi 懈			koai 拐拐		
疑	k ^h	ai 涯崖						
影	ʔ	ai 矮			Λik 隘 ₁₅₀			
曉	h						koi 歪 ₁₅₁	
匣	ɦ		hΛi 蟹	hiəi 鞋 ₁₅₂				hoa 畫 ₁₅₃
娘	ŋ	nai 孌						
莊	tʂ	ts ^h ai 債趾						
初	tʂ ^h				ts ^h a 釵 ₁₅₄			
崇	dz _ɿ				sii 柴 ₁₅₅			
生	ʂ	ts ^h ai 醢						

The *jia* 佳 rhyme (*kaikou* div.2) and *jia* 佳 rhyme (*hekou* div.2) are represented as [ai] and [oai] respectively. The reading that derived from analogy is 叉(麻 rhyme) > 釵[ts^ha]. The reading of 柴[sii] is probably derived from the reading in Old Chinese (Lee 1997: 176).

¹⁵⁰ *YH,HD,SU,GJ* [Λi]

¹⁵¹ *TG* edition [oai]

¹⁵² *HD*[hai], *SU,GJ*[hΛi]

¹⁵³ *HD,SU,GJ*[hoai].

¹⁵⁴ *SU,GJ,HD* [ts^hai]

¹⁵⁵ *HD*[sai] (popular reading[sii]), *SU,GJ* [tsΛi], *OP*[tsΛi](popular reading[sii]).

The reading of 隘 [aik] is consistent with the *yige* 乙革 *fanqie* spelling in *Hongwu zhengyun*. The reading of 畫 [hoa] is borrowed from the Chinese pronunciation in Old Mandarin. The reading of 歪 [koi] may be a mistake since it is represented as [oai] in the *DD*, *NG*, *GJG* and *DG* version of *HMJH*.

4.4.6 *Guai* 夬 rhyme

(11)

		<i>kaikou</i> div.2	<i>hekou</i> div.2
	<i>Qieyun</i>	[ɣæi]	^w ɣæi
	<i>HMJH</i>	ai	oa
並	b	p ^h ai 敗	
崇	dz _l	ts ^h ai 寨	
影	ʔ	ai 餽	
徹	t ^h	t ^h ai 薑	
匣	ɦ		hoa 話 ¹⁵⁶

The *kaikou guai* 夬 rhyme is represented as [ai]. There is only one *hekou* 夬 rhyme character in *HMJH*. The reading of 話 [hoa] is borrowed from Old Mandarin (Lee Donju 1980:126, Lee Yundong 1997:177). Because *HMJH* has only one *hekou* 夬 rhyme character, below I have listed the representation of some *hekou* 夬 rhyme characters in other sources: 快[k^hoai] (*YP*, *SU*, *GJ*, *HD*), 夬[k^hoai] (*IG*), 嚙[k^hoai] (*SG*). These examples suggest that *hekou guai* 夬 rhyme is generally represented as [oai] in MiSK.

¹⁵⁶ *YH,SE,SG* [hoa], *SU,GJ,HD*[hoai]

4.4.7 *Ji* 祭 rhyme

(12)

		<i>kaikou</i> div.3		<i>kaikou</i> type A of div.3	<i>kaikou</i> type B of div.3	<i>hekou</i> div.3	
	<i>Qieyun</i>	iɛi		iɛi	^y iɛi	^w iɛi	
	<i>HMJH</i>	iəi	iə	iəi	əi	iəi	ui, iuiəi
明	m			miəi 袂			
疑	ŋ			iəi 藝			
影	ʔ						
云	ɦ						ui 隼衛 ¹⁵⁷
來	l	liəi 例礪	liə 蠣 ¹⁵⁸				
澄	ɖ	tʰiəi 穉					
精	tʂ	tsiəi 祭穢					
心	s					siəi 歲	
章	tʂ						tsʰiuiəi 贅 ¹⁵⁹
禪	dz	siəi 誓	siə 噬 ¹⁶⁰ 筴 ¹⁶¹				
書	ɕ	siəi 世貰				siəi 稅 幌 iəi 蛻	
以	j	iəi 勸 tʰiəi 鞫					

The *ji* 祭 rhyme (Div.3 *kaikou*) is generally represented as [iəi]. Pak (1971:137)

proposes that the [iə] reading is a mimic of the [iä] when the *ji* 祭 rhyme changed from

¹⁵⁷ *YH,SE,IG,SG,HD,SU,GJ*[ui]

¹⁵⁸ *HD* [liəi]

¹⁵⁹ *SG*[tsʰiuiəi], *HD,SU,GJ* [tsʰiui]

¹⁶⁰ *YH* [siə], *IG,HD*[siəi]

¹⁶¹ *YH*[siə], *SE,HD*[siəi]

[iad] to [iäi] in the transition period from Old Chinese to Middle Chinese. It is noteworthy that the dropping of the off-glide [i] may result from the dissimilation between the on-glide [i] and off-glide [i].

For those initials that have *chongniu*, 3A division is represented as [iəi], while 3B is represented as [əi]. Since there is only one *ji* 祭 [iei] 3B character in *HMJH*, below I have listed the representation of some *ji* 祭 [iei] 3B rhyme characters in other sources: 揭 [kəi], 偈 [kəi] (cited from Ito 2007). The *hekou ji* 祭 rhyme is generally represented as [iəi]. The [w] glide in the source form is dropped due to the phonotactic constraint in Korean. The reading of 隼衛 [ui] may derived from the analogy of *wei* 微 rhyme characters 韋違 偉 [ui] (Ito 2007:146). The reading for *zhui* 贅 is [tsh^hiuiəi] in *HMJH*. The [tsh^hiuiəi] reading also occurs in the *hekou zhi* 支 rhyme characters 嘴簞捶 [tsh^hiuiəi] and the *hekou zhi* 脂 rhyme character 悴[tsh^hiuiəi]. The [iui] in [tsh^hiuiəi] is probably a reflection of the glide [ɥ] in Old Mandarin.

4.4.8 *Fei* 廢 rhyme

(13)

		<i>kaikou</i> div.3		<i>hekou</i> div.3	
<i>Qieyun</i>		iai		^w iai	
<i>HMJH</i>		iəi	ai	uəi	iəi
敷	f ^h				p ^h iəi 肺
奉	v				p ^h iəi 吠
疑	ŋ	iəi 乂 ¹⁶²	ai 刈 ¹⁶³		

¹⁶²*YH*[iəi], *CJM*,*HD*,*SU*,*GJ*[ai].

¹⁶³*YH*,*SG*[ai], *HD*,*SU*,*GJ*[iəi].

影	ʔ				iəi 滅
曉	h			huəi 喙	

The *kaikou fei* 廢 rhyme characters *yi* 乂 and *yi* 刈 are represented as [iəi] and [ai] respectively in *HMJH*. The reading of 刈 [ai] may be derived from the reflection of the [ɿi] pronunciation in Old Chinese (Pak 1971:137), or the analogy of the *tai* 泰 rhyme character 艾 [ai] (Lee 1997:179). The *hekou fei* rhyme is represented as [iəi] or [uəi]. The reading of 喙[huəi] may be derived from Old Mandarin in which the third and fourth division of *xie* 蟹 rhyme group merged into the *zhi* 止 rhyme group (Lee 1997:180). Below I have listed the representation of some *fei* 廢 rhyme characters in other sources: 廢 [p^hiəi] (*NE, SE, SG, JY*), 顛 [huəi] (*SU, GJ*), and 穢 [iəi] (*YH, SE*).

4.4.9 Qi 齊 rhyme

(14)

		<i>kaikou</i> div.4					<i>hekou</i> div.4	
<i>Qieyun</i>		[ei]					w ^e ei	
<i>HMJH</i>		iəi	i	iə	ii	ʌ	iəi	iu
幫	p	p ^h iəi 嬖	pi 篋 莖 蠅 鑊 算					
滂	p ^h		p ^h i 批 ¹⁶⁴					
並	b	p ^h iəi 陛 桂	pi 鞏 ¹⁶⁵					
明	m		mi 米 ¹⁶⁶ 迷 ¹⁶⁷ 迷					

¹⁶⁴ *HD*[piəi] (popular reading[pi])

¹⁶⁵ *HD*[piəi] (popular reading[pi])

¹⁶⁶ *HD* [miəi](popular reading[mi])

¹⁶⁷ *HD* [miəi](popular reading[mi])

見	k	kiəi 薊髻笄雞					kiəi 桂 ₁₆₈	kiu 閨 ₁₆₉
溪	k ^h	kiəi 稽啓契瀾 溪						
疑	g	iəi 猊霓鯢						
影	ʔ	iəi 暄						
曉	h	hiəi 醯						
匣	ɦ	kiəi 系蹊					hiəi 慧 ₁₇₀ 惠 ₁₇₁	kiu 畦 ₁₇₂
端	t	tiəi 邸砥墀帝 堤氐 tiəi 蒂蝟 嚏						
透	t ^h	t ^h iəi 涕 tiəi 梯						
定	d	tiəi 弟娣第悌 娣鶡蹄啼梯綈 萸踢諦 t ^h iəi 髻 棣						
泥	n		ni 泥 ₁₇₃					
來	l	liəi 鯉醴禮梲 儷荔犁盞鷗 藜 iəi 隸						
精	ts	tsiəi 濟霽濟擠 壘壘				tsΛ 沛 ₁₇₄		
清	ts ^h	ts ^h iəi 砌		ts ^h iə 妻 ₁₇₅				
從	ɗ	tsiəi 薺臍蟻						
心	s	siəi 洗		siə 壻 ₁₇₆ 西 ₁₇₇ 棲	si 嘶 ₁₈₀			

¹⁶⁸ YH [kiəi]

¹⁶⁹ YH, SU, GJ [kiu], HD [kiui]

¹⁷⁰ YH [hiəi]

¹⁷¹ NE, SE, IG, SG, SH [hiəi]

¹⁷² YH [kiu], HD [hiui] (popular reading [kiu]), SU, GJ [hiu]

¹⁷³ HD [niəi] popular reading [ni]

¹⁷⁴ SG [tsΛ]

¹⁷⁵ YH, SU, GJ [ts^hiə], HD [ts^hiəi]

¹⁷⁶ YH [siə], HD [siəi]

¹⁷⁷ HD [siəi]

				178 犀 179				
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The fourth division *kaikou qi* 齊 rhyme is generally represented as [iəi] in *HMJH*. The [i] reading occurs in some *kaikou qi* rhyme characters when the initial is 幫[p], 滂[pʰ], 並[b], 明[m] or 泥[n]. The [i] reading is a reflection of Old Mandarin, and thus it is a layer later than the [iəi] reading. In *Zhongyuan yinyun* 中原音韻, the *qi* rhyme is placed under the *qiwei* 齊微 rhyme group, the phonetic value of which is [i]. The [iə] reading in 妻壻西棲犀 may be derived from the dissimilation between the on-glide -i and the off-glide -i. The reading of 嘶 [sii] may derive from the analogy of the *zhi* 支 rhyme character 廝[sii]. The reading of 涕 [tsʌ] may derived from the analogy of the *zhi* 脂 rhyme character 姊 [tsʌ]. The fourth division *hekou qi* rhyme is represented as [iəi]. The [iu] reading is derived from analogy: 跬 (*hekou zhi* 支 rhyme) > 畦 閏 [kiu]. In *HMJH* there is an annotation for 畦[kiu], which says that "the standard reading should be the same as 奚 [kiəi]."

4.4.10 Summary

Below is a summary of the mainstream reading of the *xie* 蟹 rhyme group in *HMJH*.

4.4.10.1 *Kaikou*

	div.1		div.2			div.3		div.4
	哈	泰	皆	佳	夬	祭	廢	齊

¹⁸⁰ *SU, GJ* [sii], *HD* [siəi] (popular reading [sii])

¹⁷⁸ *YH, SU, GJ* [siə], *HD* [siəi]

¹⁷⁹ *SG* [siə], *HD* [siəi]

<i>Qieyun</i>	əi	ai	^y ɛi	^y ɛ	^y æi	iɛi	^y iɛi	iai	ei
<i>HMJH</i>	ʌi	ai	ʌi	ai	ai	iəi	əi	iəi	iəi

4.4.10.2 *Hekou*

	div.1		div.2			div.3		div.4
	灰	泰	皆	佳	夬	祭	廢	齊
<i>Qieyun</i>	uoi	^w ai	^{wy} ɛi	^{wy} ɛ	^{wy} æi	^w iɛi	^w iai	^w ei
<i>HMJH</i>	Labial	Others						
	ʌi	oi	oi	oi	oai	oai	iəi	iəi

Pak (1971:134) argues that there is a contrast between *hai* 哈 and *tai* 泰 rhymes in SK, suggesting it is a reflection of the Chinese in which *hai* 哈 and *tai* 泰 did not merge into one type. Kōno (1979:455) claims that although *hai* 哈 is generally represented as [ʌi], and *tai* 泰 as [ai], there is no strict contrast between *hai* and *tai* 泰 rhymes in SK. Kōno argues that given the fact that the *kaikou tai* 泰 rhyme is mainly represented as [ai], the *hekou tai* 泰 rhyme is expected to be [oai]. However, it is represented as [oi] in MiSK. This shows that there is no parallel relationship between *hai* 哈 and *tai* 泰 in both *kaikou* and *hekou*. As Kōno points out, the representation of the *hekou hai* 哈 and *tai* 泰 are generally represented as the same type [oi]. However, if the source form of *hai* 哈 and *tai* 泰 is exactly the same, then we need to explain why there is a contrast between the *kaikou hai* 哈 and the *kaikou tai* 泰 rhymes in SK. Moreover, the [oi] representation can be explained by assuming the *hekou* form of *tai* 泰 rhyme in the source language was [^wai]. Since the [a] in [^wai] is a back *hekou* [a], and due to the influence of the -w glide, [^wai] was likely to be perceived as [^woi].

4.5 Zhi 止 rhyme group

4.5.1 Zhi 支 rhyme

4.5.1.1 Kaikou zhi 支 rhyme

(15)

		<i>kaikou</i> div.3			<i>kaikou</i> type A of div.3	<i>kaikou</i> type B of div.3	
	<i>Qieyun</i>	ie			ie	ʷie	
	<i>HMJH</i>	i	Λ	ii,iəi	i	ii	i
幫	p				pi 卑戾 髀筭臂		pʰi 彼陂 pi 碑陂
滂	pʰ						pʰi 鉞
並	b				pi 脾婢		pʰi 被鞞 髮疲皮
明	m				mi 獮麋 彌弭		mi 糜縻
見	k				ki 枳	kii 倚羈	ki 度
溪	kʰ					kii 欹綺踦	
群	g				ki 歧	kii 錡騎	ki 技妓芰
疑	ŋ					ii 蟻義儀	
影	ʔ					ii 椅	
曉	h					hii 戲	
來	l	li 罍璃籬 鱣					
知	t	ti 智蚘					
徹	tʰ	tsʰi 𪚩					
澄	d	ti 池 tʰi 馳					
精	ts		tsΛ 紫髭				

清	tʰ		tsʌ 莉雌				
從	dz		tsʌ 骹疵				
心	s		sʌ 璽賜撕鶻	sii 廝 ¹⁸¹			
生	ʃ			sii 筵 醺			
章	tɕ	tsi 紙咫 肢枝摺 梔 tsʰi 卮					
昌	tɕʰ	tsʰi 眇					
禪	dz	si 鋌匙氏 是豉					
書	ɕ	i 弛 si 豕翅純					
船	ʒ			tiəi 舐 ¹⁸²			
日	ŋ	zi 爾邇	zʌ 兒				
以	j	i 匱攄彥					

The *kaikou* 支 rhyme is generally represented as [i]. The [ʌ] reading occurs when the initial is 精[tʃ], 清[tʰ], 從[dz], 心[s] or 日 [ŋ]. There are [ii] readings in a few *kaikou* 支 rhyme characters. Kōno (1979) claims that the [ii] reading is a layer reflecting the reading in the Tang Dynasty Chinese and the [ʌ] reading is a reflection of the [ɣ/ɣ] in the Song Dynasty Chinese. Pak (1971) proposes that the [ʌ] reading is a reflection of Old Chinese. This study agrees that the [ii] is a reflection of the source form in MC. Due to the influence of alveolar/ retroflex fricative/affricate initial, a glide [j] is added before the vowel. This caused the source form to be represented as [ii] in SK. The origin of the [ʌ]

¹⁸¹ SH [sʌ]

¹⁸² HD, SU, GJ [si]

reading is more complicated, and a detailed discussion on this issue will be provided in Chapter 6. Here I just want to note that the connection between [i] and [ʌ] is also seen in the following readings: 顛 [sɿi] (*hai* 哈 rhyme), 豺 [sɿi](*jie* 皆 rhyme), 柴 [sɿi] (*jia* 佳 rhyme). The reading of 舐 [tiəi] is caused by the analogy of the reading of 氏底低 [tiəi]. 3A division *zhi* 支 rhyme is represented as [i]. 3B division *zhi* 支 rhyme is generally represented as [ii] when the initial is velar or guttural, as [i] when the initial is labial. When the initial is [k], both [ki] and [kii] can be found. The [ki] reading should be a reflection of the sound change [kii]>[ki] in Middle Korean.

4.5.1.2 *Hekou zhi* 支 rhyme

(16)

		<i>hekou</i> div.3		<i>hekou</i> div.3A	<i>hekou</i> div.3B	
	<i>Qieyun</i>	^w ie		^w ie	^{wy} ie	
	<i>HMJH</i>	iu	i,iui, iuiəi	iu	uəi	ui
見	k			kiu 雉	kuəi 歧鷁	
溪	k ^h			kiu 窺跬		
群	g				kuəi 跪	
影	ʔ					ui 餵
曉	h			hiu 觶	huəi 毀燬	
來	l		li 羸 ¹⁸³			
澄	ɖ	t ^h iu 鍾槿				
精	ts		嘴 ts ^h iuiəi ¹⁸⁴			

¹⁸³ *HD*[lui] (popular reading[li])

¹⁸⁴ *HD,SU,GJ*[ts^hiui]

心	s	siu 髓				
章	tɕ		ts ^h iu <i>i</i> əi 簞 ¹⁸⁵ 捶 ¹⁸⁶			
昌	tɕ ^h	ts ^h iu 吹	ts ^h iu <i>i</i> 炊 ¹⁸⁷			
禪	dz	siu 睡				
日	ŋ		iəi 藥 ¹⁸⁸			

The *hekou zhi* 支 rhyme is represented as [iu] generally. The [iuiəi] reading is probably a mimic of the glide [ɥ] in Old Mandarin. The reading of 羸 [li] and 藥 [iəi] is probably derived from analogy although it is not clear which character is the source of analogy. 3A division *hekou zhi* 支 rhyme is represented as [iu]. 3B division *hekou zhi* 支 rhyme is generally represented as [uəi] or [ui].

4.5.2 Zhi 脂 rhyme

4.5.2.1 Kaikou zhi 脂 rhyme

(17)

		<i>kaikou</i> div.3		<i>kaikou</i> type A of div.3		<i>kaikou</i> type B of div.3		
	<i>Qieyun</i>	i		i		ii		
	<i>HMJH</i>	i	Λ, a, Λi	i	Λi	ii	i	əi, uəi
幫	p			pi 匕妣 p ^h i 秕			pi 鄙轡	
滂	p ^h			p ^h i 屁 pi 糞				
並	b			pi 鼻毘毘		p ^h i 圮		

¹⁸⁵ *SU, GJ*[ts^hiu], *HD*[ts^hiu*i*](popular reading[ts^hiu])

¹⁸⁶ *SU, GJ*[ts^hiu], *HD*[ts^hiu*i*](popular reading[ts^hiu])

¹⁸⁷ *TG* edition [ts^hiu], *YH*[ts^hiu], *SU, GJ*[ts^hiu*i*], *HD*[ts^hiu*i*](popular reading[ts^hiu])

¹⁸⁸ *HD* [zui](popular reading[iəi])

				p ^{hi} 鉤脰		189		
明	m				mΛi 寐 ₁₉₀		mi 眉麋 湄	
見	k					kii 肌		kuəi 机 ₁₉₁
溪	k ^h					kii 器		
群	g			ki 髻耆		kii 跽		
疑	ŋ					ii 鼻		
影	ʔ			i 蚬 i 伊				ɔi 饒
云	h							
定	d	ti 地						
來	l	li 履痢 痢梨						
徹	t ^h	t ^{hi} 締						
澄	d	t ^{hi} 雉稚 ti 墀						
娘	ŋ	ni 尼						
精	ts		tsΛ 姊 資姿 tsΛi 齏					
從	dʒ		tsΛ 自 瓷資					
心	s		sΛ 死四					
邪	z							
生	ʃ		sΛ 師獅 螭					
章	tɕ	tsi 旨指 砥脂敍						
昌	tɕ ^h	ts ^{hi} 瘥鴟						
禪	dʒ	si 視 ki 嗜						

¹⁸⁹ YH,SE[pɿi], HD[pɿi](popular reading[pɿi]), SU,GJ[pɿ]

¹⁹⁰ YH,CJM,SG,SH [mΛi], SU,GJ [mi], HD[mi] (popular reading[mΛi]).

¹⁹¹ Xiamen 廈門 dialect (colloquial pronunciation [kui], literary pronunciation [ki])

書	ɕ	si 矢屎 屍鳴						
日	ŋ	zi 槓二 貳						
以	j	i 夷姨						

The *kaikou zhi* 脂 rhyme is generally represented as [i]. The *zhi* 脂 rhyme is represented as [ʌ] when the initial is alveolar fricative or affricate except in the case of 齏 [tsʌi], which is derived from the analogy of the *jie* 皆 rhyme character 齋 [tsʌi]. 3A division *kaikou zhi* 脂 rhyme is represented as [i]. The reading of 寐 [mʌi] is derived from the analogy of the *hui* 灰 rhyme characters 妹昧 [mʌi]. As for 3B division, it is generally represented as [ii]. All the [pii] reading in Middle SK changed to [pi] in Modern SK. The reading of 鄙嚮 [pi] is a reflection of this change. According to Pak (1971:191) the reading of 机 [kuəi] is derived from the analogy of the reading of 軌 [kuəi], which is a *hekou zhi* 旨 rhyme character.

4.5.2.2 *Hekou* 脂 rhyme

(18)

		<i>hekou</i> div.3		<i>hekou</i> div.3A	<i>hekou</i> div.3B	
	<i>Qieyun</i>	w _i		w _i	w ^y _i	
	<i>HMJH</i>	iu	oi, ui, iui, iuiəi, io	iu	uəi	u,ui, iu
見	k					ku 晷 ¹⁹² kui 龜 ¹⁹³
群	g			kiu 葵	kuəi 蕢 ¹⁹⁴ 櫃	kiu 逵 ¹⁹⁶

¹⁹² YH[ku], SU,GJ[kwəi], HD[kui], OP [kwəi](standard reading [kui], popular reading[ku])

¹⁹³ YH,HD,SU,GJ[kui]

					195	
云	h	iu 帷	ui 位 ¹⁹⁷			
來	l	liu 壘淚蘂				
澄	ɖ		t ^h oi 椎 ¹⁹⁸			
精	ts		ts ^h iui 醉 ¹⁹⁹ ts ^h ui 翠 ²⁰⁰			
從	ɖz		ts ^h iuiəi 悴 ²⁰¹			
心	s	siu 菱				
邪	z	siu 縊燧簪 穗				
生	ʃ	siu 帥	ts ^h oi 穰 ²⁰²			
章	tɕ	ts ^h iu 崔	ts ^h io 佳 ²⁰³ 錐 ₂₀₄			
禪	ɖz	siu 誰睢				
書	ɕ	siu 水				
日	ɳ	ziu 綏				
以	j	iu 墮				

The 3/3A division *hekou zhi* 脂 rhyme is generally represented as [iu]. According to Pak (1971:192), the reading of 穰 [ts^hoi] is derived from the analogy of the *hui* 灰 rhyme character 縊[ts^hoi] . The reading of 悴 [ts^hiuiəi] is probably a reflection of the reading in Old Mandarin. The 3B division *hekou* 脂 rhyme is generally represented as [uəi] or [ui].

¹⁹⁴ HD[kui] (popular reading[kuəi])

¹⁹⁶ HD[kuii](popular reading[kiu])

¹⁹⁵ HD[kui] (popular reading[kuəi])

¹⁹⁷ CJM,YH,NE,SE,IG,SG,JY[ui]

¹⁹⁸ HD[ts^hiui](popular reading[ts^hiu]), SU,GJ[ts^hiu], OP[ts^hiu](popular reading[t^hoi])

¹⁹⁹ YH,HD,SU,GJ[ts^hiui]

²⁰⁰ YH,CJM,HD,SU,GJ[ts^hiui]

²⁰¹ YH[tshiuiəi],SU,GJ [ts^hui] , HD[ts^hui](popular reading[ts^hiuəi])

²⁰² HD,SU,GJ[ts^hoi]

²⁰³ SU,GJ[ts^hiu]

²⁰⁴ YH,SU,GJ[ts^hiu], HD[tshiui](popular readingtshiu)

4.5.3 Zhi 之 rhyme

(19)

		kaikou div.3			
	Qieyun	i			
	HMJH	i	ii	Λ	Λi
見	k		kii 箕基 hii 姬		
溪	k ^h		kii 起		
群	g		kii 棋旗麒麟		
影	ʔ		ii 意薏醫		
曉	h		hii 蟪		
來	l	li 鯉理里裏吏狸嫠 ni 李			
徹	t ^h	t ^h i 癡			t ^h Λi 答 ²⁰⁵
澄	ɖ	t ^h i 痔			
娘	ŋ	ni 你			
精	ts			tsΛ 子滋孳 籽磁鼎	tsΛi 梓 ²⁰⁶
從	ɖz			tsΛ 字忤慈 鷺鷥	
心	s	菓 si		sΛ 筍司鴛 蓀絲	
邪	z			sΛ 似耜祀 飼寺祠詞	
莊	tʂ		t ^h ii 輜 ²⁰⁷ 鮠 ²⁰⁸	sΛ 鏹	tsΛi 滓 ²⁰⁹
初	tʂ ^h	tʂ ^h i 廁 ²¹⁰			

²⁰⁵ HD, SU, GJ [ts^hi], OP [ts^hi] (popular reading [t^hΛi])²⁰⁶ HD, SU, GJ [tsΛ].²⁰⁷ HD [ts^hi] (popular reading [ts^hii])²⁰⁸ HD [ts^hi]²⁰⁹ YH [tsΛi], HD, SU, GJ [tsΛ], OP [tsΛ] (popular reading [tsΛi])²¹⁰ TG edition: [ts^hΛ], YH [ts^hΛ], HD, SU, GJ [ts^hi]

崇	dz _ɿ	si 柿 ²¹¹		s _Λ 士事	
生	ʃ			s _Λ 史	
章	tɕ	tsi 址沚趾痣志芝			
昌	tɕ ^h	ts ^h i 齒蚩			
禪	dz	si 市闢時蒔埒			
書	ɕ	si 詩			
日	ŋ	zi 耳珥餌珥珥輻			
以	j	i 苡頤飴貽莒			

The *zhi* 之 rhyme is generally represented as [iɪ], [i] and [ʌ] in *HMJH* according to the place of articulation. It is represented as [iɪ] when the initial is velar or guttural, [ʌ] for alveolar fricative/affricate and retroflex fricative/affricate, and [i] for other initials. The readings that result from analogy include 台(*tou* 透 initial *hai* 哈 rhyme)>答[t^hʌi], 宰(*jing* 精 initial *hai* 哈 rhyme) >滓[tʰsʌi].

4.5.4 Wei 微 rhyme

(20)

		<i>kaikou</i> div.3			<i>hekou</i> div.3	
	<i>Qieyun</i>	iɪ			w ^u iɪ	
	<i>HMJH</i>	i	iɪ	ʌi, iɪ	ui	uəi
非	f	pi 樞筐沸扉非 飛		pɪɪ 沸 ²¹² pʌi 緋 ²¹³		
敷	f ^h	pi 妃				
奉	v	pi 翡荊腓肥				
微	ŋ	mi 尾味薇				

²¹¹ YH[si]

²¹² MoSK: [pi]

²¹³ HD, SU, GJ[pi].

見	k		kii 蟻機機 譏機		kui 鬼貴	
溪	k ^h		kii 氣			
群	g		kii 璣畿祈			
影	ʔ		ii 宸衣		ui 威威	
曉	h		hii 豨		hui 暉	huəi 卉 ²¹⁴ huəi 虺 ²¹⁵
云	ɦ				ui 葦蝟緯 胃韋幃闡 hui 彙	

The *wei* 微 rhyme is generally represented as [ii] or [i] according to the place of articulation. It is represented as [i] for labial initials and [ii] elsewhere. The reading of 癉 [piɿ] is derived from the analogy of its phonetic component 弗 [piɿ]. The reading of 緋 [pɿi] is derived from the analogy of the *jie* 皆 rhyme characters 俳排 [pɿi]. The *hekou wei* 微 rhyme is generally represented as [ui] or [uəi].

4.5.5 Summary

Below is a summary of the mainstream reading of the *zhi* 止 rhyme group in *HMJH*.

4.5.5.1 *Kaikou*

(21)

	支		脂		之	微
	<i>kaikou</i> div.3(A)	<i>kaikou</i> type B of div.3	<i>kaikou</i> div.3(A)	<i>kaikou</i> type B of div.3	<i>kaikou</i> div.3	<i>kaikou</i> div.3
<i>Qieyun</i>	ie	^y ie	i	^y i	i	ii

²¹⁴ SE,SG[huəi], HD [hoi](popular reading[huəi])

²¹⁵ SE,SG,SU,GJ[huəi],HD[hoi]

<i>HMJH</i>		Alveolar, Retroflex Fricative and Affricate			Alveolar, Retroflex Fricative and Affricate		other	Velar Guttural	Alveolar, Retroflex Fricative and Affricate	Labial	other
	i	Λ	ii	i	Λ	ii	i	ii	Λ	i	ii

4.5.5.2 *Hekou*

(22)

	支			脂			微	
	<i>hekou</i> div.3(A)	<i>hekou</i> div.3B		<i>hekou</i> div.3(A)	<i>hekou</i> div.3B		<i>hekou</i>	
<i>Qieyun</i>	^w ie	^{wy} ie		^w i	^{wy} i		^w ii	
<i>HMJH</i>	iu	uəi	ui	iu	uəi	ui	ui	uəi

4.6 *Xiao* 效 rhyme group4.6.1 *Hao* 豪 rhyme

(23)

		<i>kaikou</i> div.1			
	<i>Qieyun</i>	au			
	<i>HMJH</i>	o	io	ioi	u
幫	p	po 堡褓寶			
並	b	p ^{ho} 暴褓袍			
明	m	mo 帽毛瑁			
見	k	ko 稟誥告羔膏棹橐篙餒皐			
溪	k ^h	ko 槁拷考箐犒尻			
疑	ŋ	o 熬熬熬厥葵 ko 翹			
影	ʔ	o 襖媼爇			
曉	h	ho 好好薈蒿			

匣	fi	ho 昊號豪壕嗥			
端	t	to 島擣拷刀舠			
透	tʰ	tʰo 套 to 饗	tʰio 縹		
定	d	to 道稻盜桃陶萄淘濤			
泥	n	no 瑙腦	nio 𪛗 ²¹⁶		
來	l	lo 老鵠老滂撈撈	lio 潦 ²¹⁷ 𪛗 ²¹⁸	loi 牢 ²¹⁹	
精	ts	tso 藻早蚤澡棗龜糟			
清	tsʰ	tsʰo 草驍 tso 糙			
從	dz	tso 皂造槽曹艘漕			
心	s	tso 噪臊 so 搔縹			su 嫂 ²²⁰ 艘 ²²¹

The *hao* 豪 rhyme is generally represented as [o]. The readings that derived from analogy include 條(蕭 rhyme)> 縹[tʰio], 寮燎僚(宵 rhyme)> 潦𪛗 [lio], 縹縹(蕭 rhyme)> 縹 [lio]. The annotation for 𪛗 [lio] in *HMJH* states that "the standard reading is the same as 老[lo]". The reading of 嫂嫂[su] is derived from the analogy of 嫂嫂[su]. The reading of 牢[loi] includes an extra off-glide [i]. Kōno (1979) proposes that the [i] glide in some words can be explained by the fact that these words were always followed by the nominative case particle *-i* or the predicative particle *-i*. As a result, the *-i* particle was mistakenly perceived as part of the word by speakers.

²¹⁶ HD,SU,GJ[no]

²¹⁷ SG,SU,GJ[lo]

²¹⁸ HD[lio], SU,GJ[lo], OP[lo](standard reading [lio])

²¹⁹ YH,SG,HD,SU,GJ [lo], OP[lo](popular reading[loi])

²²⁰ HD,SU, GJ[so], OP[so](popular reading[siu])

²²¹ HD,GJ[so]

4.6.2 Xiao 肴 rhyme

(24)

		<i>kaikou</i> div.2		
	<i>Qieyun</i>	^y æu		
	<i>HMJH</i>	o	io	oa
幫	p	p ^h o 飽苞	p ^h io 豹 ²²²	
滂	p ^h	p ^h o 砲庖泡孚		
並	b	p ^h o 庖庖匏咆跑跑麇匏匏		
明	m	mo 貌螯茅		
見	k		kio 鉸狡酵校教窖覺咬交膠郊	
溪	k ^h		kio 磽骹	
疑	ŋ		io 咬	
影	ʔ		io 坳	
曉	h	ho 髑 ²²³	hio 孝哮	
匣	ɦ		hio 肴	
知	t		tio 嘲	
澄	ʈ	to 棹 ²²⁴		
娘	ɳ		nio 鬧 io 饒	
心	s			
莊	tʂ	tso 爪 ²²⁵ 筴		koa 抓 ²²⁶
初	tʂ ^h		ts ^h io 炒鈔	
崇	dz	so 巢 ²²⁷		
生	ʃ	so 鞘	ts ^h io 梢艸 sio 弔蛸筲	

²²² *YH,HD,SU,GJ*[p^hio]²²³ *HD*[hio]²²⁴ *YH*[to], *HD,OP*[tso](popular reading[to]), *SU,GJ*[tso]²²⁵ *YH,SG*[tso]²²⁶ *TG* edition[tsoa], *HD,SU,GJ*[tso]²²⁷ *YH,SE,IG,SG,HD*[so], *OP*[ts^hio](standard reading [so]), *SU,GJ*[ts^hio]

The *yao* 肴 rhyme is represented as [o] or [io]. The distribution of [o] and [io] is generally according to the place of articulation. The [o] form mainly occurs for labial initials, while [io] elsewhere (the [o] reading is a reflection of the sound change [io]>[o] for fricative/affricate initials in Middle Korean). The reading of 抓[koa] is derived from the analogy of the *ma* 麻 rhyme character 瓜 [koa].

4.6.3 *Xiao* 宵 rhyme

(25)

		<i>kaikou</i> div.3	<i>kaikou</i> type A of div.3	<i>kaikou</i> type B of div.3
	<i>Qieyun</i>	i _{IEU}	i _{IEU}	^v i _{IEU}
	<i>HMJH</i>	io	io	io
幫	p			p ^h io 表臆鑣鑣
並	b		p ^h io 瓢藻鰓	
明	m			mio 廟苗描貓
見	k			kio 嬌
溪	k ^h		kio 蹺	kio 鞦
群	g			kio 鞦橋蕎
影	ʔ		腰 io	io 夭
云	h			hio 鴉
來	l	lio 療		
知	t	tio 朝		
澄	ɖ	tio 朝潮		
精	ts	ts ^h io 椒焦礁蕉鷄		
清	ts ^h	ts ^h io 楸栗		
從	ɖz	ts ^h io 詔樵樵		
心	s	sio 笑宵霄焞鞘		

		ts ^h io 綃		
章	tɕ	sio 沼 tsio 照詔陞		
昌	tɕ ^h	ts ^h io 𪗇 t ^h io 弔		
書	ɕ	sio 燒		
日	ŋ	io 蕘 zio 橈		
以	j	io 曜鷗窰瑤輶謠召		

The *xiao* 宵 rhyme is a third division rhyme. It is represented as [io] in *HMJH* for both 3/3A division and 3B division.

4.6.4 *Xiao* 蕭 rhyme

(26)

		<i>kaikou</i> div.4
	<i>Qieyun</i>	eu
	<i>HMJH</i>	io
見	k	kio 微叫 hio 梟
曉	h	hio 曉
端	t	tio 烏鈞雕調 t ^h io 貂
透	t ^h	tio 眺耀
定	d	tio 鈔跳蝸鰲條 t ^h io 韶條
泥	n	nio 尿
來	l	lio 蓼獠僚鵠
心	s	sio 嘯簫蠟

The *xiao* 蕭 rhyme is a fourth division rhyme. It is represented as [io] in *HMJH*.

4.6.5 Summary

The mainstream representation of the *xiao* 效 rhyme group in Middle SK can be summarized as below.

(27)

	豪	肴		宵		蕭
	<i>kaikou</i> div.1	<i>kaikou</i> div.2		<i>kaikou</i> div.3/3A	<i>kaikou</i> div.3B	<i>kaikou</i> div.4
<i>Qieyun</i>	au	ʷæu		iɛu	ʷiɛu	eu
<i>HMJH</i>		Labial	Other			
	o	o	io	io	io	io

4.7 *Liu* 流 rhyme group

4.7.1 *Hou* 候 rhyme

(28)

		<i>kaikou</i> div.1		
	<i>Qieyun</i>	u		
	<i>HMJH</i>	u	o	iu
並	b	pu 部抔		
明	m	mu 貿懣	mo 某 ²²⁸ 牡 ²²⁹ 拇 ²³⁰ 母 ²³¹ 畝 ²³² 姆 ²³³	
見	k	ku 垢筍狗構購觀殼雉溝葦篝鉤鞫		
溪	k ^h	ku 口鈞筓穀寇紉謳謳		
疑	ŋ	u 藕隅		
影	ʔ	ku 嘔漚甌鷗謳噀		
曉	h	hu 吼		
匣	ɦ	hu 後后銑候埃侯猴猴喉喉		

²²⁸ YH[mo], HD,SU,GJ,OP[mu]

²²⁹ YH,SE,SG[mo], HD,SU,GJ [mu], OP[mu](popular reading[mo])

²³⁰ IGHDSUGJ[mu], OP[mu](popular reading[mo])

²³¹ HG,CJM,YH,NE,SE,IG,SG,JY,SH [mo], HD,SU,GJ [mu], OP[mu](popular reading[mo])

²³² YH[mo],CJM,SE[mio],SG[mo],[mio], HD,SU,GJ[mu],OP[mu](popular reading[mio])

²³³ SH[mu]

端	t	tu 斗抖蚪𪔐 t ^h u 鬪	to 筲	
透	t ^h	t ^h u 偷		tiu 鋤 ²³⁴
定	d	tu 痘豉𪔐𪔐頭寔 t ^h u 𪔐𪔐𪔐		
泥	n			niu 𪔐 ²³⁵
來	l	lu 樓癭漏𪔐𪔐𪔐𪔐𪔐𪔐𪔐		
精	ts	tsu 奏		
清	ts ^h	tsu 𪔐		
心	s	su 𪔐𪔐𪔐𪔐𪔐𪔐		

The *hou* 侯 rhyme is generally represented as [u]. Huang Cuibo (1931:105) points out that in *qinyin* 秦音 (Chang'an dialect) in Huilin 慧琳's (737–820) time the *hou* 侯 characters *mu* 拇, *mu* 母, and *mu* 牡 had already merged into *mu* 暮 rhyme. The reading of 鋤[t^hiu] and 𪔐[niu] is probably derived from analogy although it is not clear which character is the source of analogy.

4.7.2 You 尤 rhyme

(29)

		<i>kaikou</i> div.3			
	<i>Qieyun</i>	iu			
	<i>HMJH</i>	u	iu	o	iu, iuk
明	m			mo 𪔐 ²³⁶ 𪔐 ²³⁷ 𪔐 ²³⁸ 𪔐 ²³⁹	

²³⁴ *HD*[tiu], *SU, GJ*[t^hu], *OP*[tiu](popular reading[iu])

²³⁵ *HD, SU, GJ*[nu]

²³⁶ *SE, SG*[mo], *HD, OP*[mu](popular reading[mo]), *SU, GJ*[mu]

²³⁷ *HD, OP*[mu] (popular reading[mo]), *SU, GJ*[mu]

²³⁸ *HD*[mu] (popular reading[mo]), *SU, GJ*[mu]

²³⁹ *YH*[mo], *HD, OP*[mu](popular reading[mo]), *SU, GJ*[mu]

非	f	pu 缶殍否魚 富鵠			
敷	f ^h	pu 副			
奉	v	pu 婦負阜蝻 蜉莽柎			
見	k	ku 九韭廢鳩 鬪			
溪	k ^h	ku 糗丘蚯			
群	g	ku 舅臼柩裘 仇毬楸			
疑	ŋ	u 牛			
影	ʔ	u 優耄麀			
曉	h		hiu 僂		
云	ɦ	u 右友祐疣	iu 囿		
來	l		liu 柳畱瘤溜溜琉琉 榴鷗流		
知	t		tɿu 肘晝輶宙胄紬籌 疇		
娘	ɳ		niu 紐鈕扭扭 liu 扭		
精	ts		tsiu 酒		ts ^{hi} ui 儼 ²⁴⁰
清	ts ^h		ts ^{hi} iu 秋鯁楸湫鞦鵲 楸鞦		
從	ɗz		ts ^{hi} iu 鶯		
心	s		siu 繡鏤鏟		
邪	z		siu 袖岫洵		
莊	tʂ	ts ^h u 皺縐	ts ^{hi} iu 甃 ²⁴¹ 緇 ²⁴²		
初	tʂ ^h	ts ^h u 簍			
生	ʂ	su 瘦菟洩蝮 搜			
章	tʂ		ts ^{hi} iu 筭 tsiu 洲州舟		ts ^{hi} uk 呪 ²⁴³

²⁴⁰ HD, SU, GJ[ts^hu], OP[ts^hu](popular reading[ts^{hi}ui])

²⁴¹ IG, HD[ts^{hi}iu], SU, GJ[ts^hu]

²⁴² SU, GJ[ts^hu]

²⁴³ HD, SU, GJ[tsu]

昌	tɕ ^h				ts ^h iui 醜 ²⁴⁴ 臭 ²⁴⁵
禪	dz		siu 受壽售酬讎		
書	ɕ		siu 手首狩獸收		
日	ɳ		ziu 茱		
以	j		iu 牖莠誘柚游蚰油 蟠旃		

The *you* 尤 rhyme is generally represented as [u] or [iu] according to the place of articulation. It is represented as [u] when the initial is labial, velar, guttural or retroflex fricative/affricate, and [iu] elsewhere. According to Huang (1931:108), in *qinyin* 秦音 (Chang'an dialect) the *you* 尤 rhyme characters 矛謀 had already merged into *mu* 模 rhyme in Huilin 慧琳's (737–820) time. The reading of 呪 [ts^hiuk] is derived from the analogy of the *wu* 屋 rhyme character 祝 [ts^hiuk] (Pak 1971:182, Synn 2006:95).

4.7.3 You 幽 rhyme

The *you* 幽 rhyme is a third division rhyme. There is only one *you* 幽 rhyme character in *HMJH*: 幼 [iu]. The *you* 幽 rhyme is represented as [iu] in the following characters in *HD*, *SU* and *GJ*: 繆糾[kiu], 由[iu], 秋[ts^hiu], 囚秀[siu], and 繆[liu]. This shows that the representative form of the *you* 幽 rhyme is [iu] in Middle Sino-Korean.

4.7.4 Summary

²⁴⁴ *HG, YH, IG, SG*[ts^hiui], *HD, SU, GJ*[ts^hu], *OP*[ts^hu](popular reading[ts^hiui])

²⁴⁵ *YH, SG, SG, JY*[ts^hiui], *HD, SU, GJ*[ts^hu], *OP*[ts^hu](popular reading[ts^hiui])

Based on the above discussion, the mainstream representation of the *liu* 流 rhyme group can be summarized as below.

(30)

	侯	尤		幽
	<i>kaikou</i> div.1	<i>kaikou</i> div.3		<i>kaikou</i> div.3
<i>Qieyun</i>	u	iu		iu
<i>HMJH</i>		labial, guttural, retroflex fricative & Affricate	other	
	u	u	iu	iu

4.8 *Xian* 咸 rhyme group

4.8.1 *Tan* 覃 rhyme

(31)

		覃 (<i>kaikou</i> div.1)		合 (<i>kaikou</i> div.1)
	<i>Qieyun</i>	əm		əp
	<i>HMJH</i>	am	Λm	ap
見	k	kam 紺		hap 鴿閣蛤
溪	k ^h	kam 坎塹 ham 龕		
影	ʔ	am 暗庵鵲		ap 罨
匣	ɦ	ham 撼頷含函		hap 鉤
透	t ^h	t ^h am 探貪		tap 蹀踏
定	d	tam 潭蟬墀蕩		
泥	n	nam 男南		nap 納衲
來	l	nam 嵐 lam 婪		
精	ts	tsam 搭		tsap 咂

從	dz		tsam 蚕 ²⁴⁶	
心	s	ts ^h am 慘 ²⁴⁷		

The *tan* 覃 rhyme is generally represented as [am] except in the case of 蚕 [tsam]. Pak (1971:141) and Kōno (1979) claim that this [am] reading is a reflection of Old Chinese, arguing that the *tan* 覃 rhyme is reconstructed as [əm] in Karlgren's reconstruction of Old Chinese. Although this explanation is possible, the source of this [am] reading is not necessarily from Old Chinese since the *tan* 覃 rhyme is reconstructed as [əm] in the *Qieyun* system in some scholar's reconstruction (eg. Pan and Zhang 2013). The *he* 合 rhyme is represented as [ap] in *HMJH*.

4.8.2 *Tan* 談 rhyme

(32)

		談 (<i>kaikou</i> div.1)		盍 (<i>kaikou</i> div.1)
	<i>Qieyun</i>	am		ap
	<i>HMJH</i>	am	an	ap
見	k	kam 甘柑柑		
溪	k ^h	kam 瞰坩		hap 榼
曉	h	ham 憇		
端	t	tam 膽擔		
透	t ^h	tam 毯莢	tan 圯	t ^h ap 塔搭榻塌
定	d	tam 噉淡談痰		
來	l	lam 攬熅覽纜濫籃藍檻		nap 臘蠟 lap 蜺

²⁴⁶ The traditional version of the character *can* 蚕, namely *can* 蠶, is represented as [tsam] in *YH,SE,HD* and [tsam] in *SG,SU,GJ*.

²⁴⁷ *TG* edition *HMJH* : [sam]

心	s	sam 三		sap 𩇛
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The *tan* 談 rhyme and the *he* 盍 rhyme are represented as [am] and [ap] respectively. The reading of 𩇛 [tan] is derived from the analogy of the reading of its phonetic component 丹 [tan].

4.8.3 Xian 咸 rhyme

(33)

		咸 (<i>kaikou</i> div.2)		洽 (<i>kaikou</i> div.2)	
	<i>Qieyun</i>	^y em		^y ep	
	<i>HMJH</i>	am	iəm	ap	iəp
見	k		kiəm 𩇛 ²⁴⁸		hiəp 袂 ²⁴⁹
溪	k ^h				kiəp 搯 ²⁵⁰
匣	ɦ	ham 餡陷鹹			
知	t	ts ^h am 站		tsap 𩇛	
澄	d	tam 賺			
莊	tʂ	tsam 蘸			
初	tʂ ^h			sap 鋤插	
崇	dz	ts ^h am 讒饒			
生	ʂ	sam 衫		sap 敵箆	

The *xian* 咸 rhyme is generally represented as [am]. The reading of 𩇛 [kiəm] is derived from the analogy of the reading of its phonetic component 兼 [kiəm], which is a 4th

²⁴⁸ *HD, SU, GJ* [kiəm]

²⁴⁹ *HD* [kiəp] (popular reading [hiəp]), *SU, GJ* [kiəp]

²⁵⁰ *HD* [kap]

division *tian* 添 rhyme character. The *qia* 洽 rhyme is generally represented as [ap]. The reading of 袂 [hiəp] is probably derived from the analogy of the reading of 俠賴挾 [hiəp], which are fourth division *tie* 帖 rhyme characters.

4.8.4 *Xian* 銜 rhyme

(34)

		銜 (<i>kaikou</i> div.2)	狎 (<i>kaikou</i> div.2)
	<i>Qieyun</i>	^y æm	^y æp
	<i>HMJH</i>	am	ap
見	k	kam 鑑	kap 甲胛
溪	k ^h	kam 嵌	
疑	ŋ	am 巖	
影	ʔ		ap 鴨壓
匣	ɦ	ham 檻銜	kap 匣
生	s	sam 衫	

The *xian* 銜 rhyme and the *xia* 狎 rhyme are represented as [am] and [ap] respectively in *HMJH*.

4.8.5 *Yan* 鹽 rhyme

(35)

		鹽			葉		
		<i>kaikou</i> div.3	<i>kaiko</i> u type A of div.3	<i>kaikou</i> typeB of div.3	<i>kaikou</i> div.3	<i>kaikou</i> typeA of div.3	<i>kaikou</i> type B of div.3

	<i>Qieyun</i>	iɛm		iɛm	ʷiɛm		iɛp	iɛp	ʷiɛp
	<i>HMJH</i>	iəm	ɬm	iəm	əm	iəm, am	iəp		iəp
見	k				kəm 驗 kəm 檢				
群	g				kəm 儉	kam 芡 ²⁵¹ kiəm 鉗			
影	ʔ			iəm 壓 襪 襪	əm 闇 醃	am 俺			
云	ɦ	iəm 炎							niəp 飴
來	l	liəm 殮 ²⁵² 廉 匳 簾 帘 鎌 賺 驗 歛					liəp 鬣 獵		
徹	tʰ	tʰiəm 諂 tiəm 覘							
娘	ŋ						niəp 鐳		
精	ts						tsʰiəp 睫 tsiəp 接		
清	tsʰ	tsʰiəm 籤					tsʰiəp 妾		
從	ɖ		tsam 潛 ²⁵³						
章	tɕ	tsʰiəm 瞻 tsiəm 占							
昌	tɕʰ	tsʰiəm 韃							
禪	ɖʑ	siəm 蟾							
書	ɕ	siəm 苦 tsiəm 店					siəp 鞞 攝		
日	ɻ	ziəm 染 髻 杓							

²⁵¹ *HD, SU, GJ*[kəm], *OP*[kəm](popular reading[kam])

²⁵² Modern korean: [kəm]

²⁵³ *YH, CJM, SE, IG, SG, JY, HD*[tsam], *SU, GJ*[tsʰiəm], *OP* [tsʰiəm](standard reading [tsam])

以	j	iəm 燄 戾 艷 閭 鹽 zɪəm 擱 tsʰiəm 簷					iəp 葉		
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The *yan* 鹽 rhyme is generally represented as [iəm]. The 3/3A division *yan* 鹽 rhyme is generally represented as [iəm] except in the case of 潛 [tsɿm]. The 3B division *yan* 鹽 rhyme is generally represented as [əɪm]. The reading of 芡 [kam] is derived from the analogy of the *tan* 覃 rhyme characters 坎 砍 [kam]. *An* 俺 is represented as [am] in *HMJH*. The *fanqie* for *an* 俺 in *Guangyun* 廣韻 is *yuyan* 於驗, therefore, the expected SK reading for *an* 俺 is [əɪm]. Pak (1975:147) claims that 俺 [am] is derived from the analogy of the reading of *tan* 覃 rhyme character 庵[am]. Synn (2006:114) proposes that the reading of 俺 [am] is probably a reflection of Old Chinese. Lee (1997:162) notes that the reading of 俺 [am] is a reflection of the *yugan* 於感 *fanqie* spelling in *Jiyun* 集韻. The *ye* 葉 rhyme is represented as [iəp] for both 3/3A division and 3B division.

4.8.6 *Yan* 嚴 rhyme

(36)

		嚴 (<i>kaikou</i> div.3)		業 (<i>kaikou</i> div.3)
	<i>Qieyun</i>	jam		jap
	<i>HMJH</i>	əɪm	im	əp
見	k	kəɪm 劍		kəp 劫
溪	kʰ		him 欠 ²⁵⁴	
疑	ŋ	əɪm 釃 嚴		əp 業

²⁵⁴ *YH*[him], *HD*[kiəm] (popular reading[him]), *OP* [kəɪm](popular reading[him]), *SU, GJ*[kəɪm]

影	ʔ	əm 淹		
曉	h	həm 歛	him 欵 ²⁵⁵	həp 脇

The *yan* 嚴 rhyme and the *ye* 業 rhyme are mainly represented as [əm] and [əp] respectively in *HMJH*. According to Kōno (1979), the reading of 欠欵 [him] is derived from the analogy of the *qin* 侵 rhyme character 欵 [him].

4.8.7 *Tian* 添 rhyme

(37)

		添 (<i>kaikou</i> div.4)	帖 (<i>kaikou</i> div.4)
	<i>Qieyun</i>	em	ep
	<i>HMJH</i>	iəm	iəp
見	k	kiəm 兼縑	hiəp 莢頰筴鋏蛺
溪	k ^h	kiəm 歉	hiəp 篋
端	t	tiəm 店	
透	t ^h	t ^h iəm 舔添	t ^h iəp 帖貼
定	d	tiəm 簞莞韃 t ^h iəm 甜	tiəp 蝶牒 t ^h əp 牒
泥	n	niəm 鮎 tsiəm 拈	niəp 捻

The *tian* 添 rhyme and the *tie* 帖 rhyme are represented as [iəm] and [iəp] respectively in *HMJH*.

4.8.8 *Fan* 凡 rhyme

²⁵⁵ *HD, SU, GJ*[həm]

Fan 帆, the only *fan* 凡 rhyme character in *HMJH*, is represented as [pəm]. *Fa* 法 is the only *fa* 乏 rhyme character in *HMJH*, and it is represented as [pəp]. Below I have listed the reading of some *fan* 凡 rhyme characters in other sources: 凡 [pəm] (*YP*, *SE*, *SG*, *JY*, *SH*), 犯 [pəm] (*YP*, *NE*, *SE*, *IG*), 範 [pəm] (*YP*, *SE*).

4.8.9 Summary

Below is a summary of the mainstream representation of the *xian* 咸 rhyme group in *HMJH*.

(38)

	覃	談	咸	銜	鹽	嚴	添
	<i>kaikou</i> div.1	<i>kaikou</i> div.1	<i>kaikou</i> div.2	<i>kaikou</i> div.2	<i>kaikou</i> div.3	<i>kaikou</i> div.3	<i>kaikou</i> div.4
<i>Qieyun</i>	əm	am	ɤm	ɤæm	iɛm	jam	em
<i>HMJH</i>	am	am	am	am	iəm	əm	iəm

4.9 *Shen* 深 rhyme group

4.9.1 *Qin* 侵 rhyme

(39)

		<i>kaikou</i> div.3			<i>kaikou</i> type B of div.3		
	<i>Qieyun</i>	im			ɤim		
	<i>HMJH</i>	im	im	ɬm	im	am	um
滂	p ^h						p ^h um 品 ²⁵⁶
見	k				kim 錦今 襟金		
溪	k ^h				kim 衾		

²⁵⁶ *YH,SE,IG,SH* [p^hum], *IG,HD,SU,GJ*[pim].

群	g				kim 矜禽 琴檣噲		
疑	ŋ				im 吟		
影	ʔ				im 飲窖 音陰	am 瘡 ²⁵⁷	
曉	h				him 歆		
來	l	lim 霖林	lim 廩 ²⁵⁸ 櫟				
知	t	sim 榼 t ^h im 砧					
娘	ŋ	nim 賃					
清	t ^h	t ^h im 寢篴					
從	dʒ	sim 蓴					
心	s	sim 心					
邪	z	sim 燭鬻					
莊	tʂ			t ^h Λm 譖 tsΛm 簪			
崇	dʒ			tsΛm 涔岑			
生	ʃ			sΛm 蓼			
章	tʂ	t ^h im 枕鍼 tsim 斟					
昌	tʂ ^h	sim 藩					
書	ʃ	sim 孀					
船	ʒ	sim 甚					
日	ŋ	nim 稔恁 zim 衽絰 任妊荏鉞					

The 3/3A division *qin* 侵 rhyme is generally represented as [im]. The reading of *lin* 廩櫟 is [lim] in *HMJH*. The *fanqie* for *lin* 廩櫟 is *lijin* 力錦 in *Jiyun*. Given that the reading of *jin* 錦 is [kim] in *HMJH*, the reading of 廩櫟 [lim] is consistent with this *fanqie* in *Jiyun*.

²⁵⁷ HD, SU, GJ [im]

²⁵⁸ YH, HD, SU, GJ [lim]

The 3/3A division *qin* 侵 rhyme is represented as [Λm] when the initial is retroflex *zhuang* 莊 [tʂ], *chong* 崇 [dz] or *sheng* 生[ʂ]. Pak (1971:194) claims that the [Λm] reading is a reflection of Old Chinese, in which the phonetic value of the *qin* 侵 rhyme is [iəm]. However, in *Guangyun* there are two *fanqie* spellings for *zan* 簪(*zuohan* 作含 and *ceyin* 側吟) and *shen* 蓼(*suhan* 蘇含 and *suojin* 所今). Therefore, the reading of 簪 [tsΛm] and 蓼 [sΛm] may be a reflection of the first *fanqie* spelling. It is noteworthy that in *Jiyun* one of the *fanqie* for 涔 𣶒 [tsΛm] is *chuzan* 鉏簪, which the reading of 涔 𣶒 [tsΛm] is consistent with. The 3B division *qin* 侵 rhyme is generally represented as [im]. The reading of 瘖[am] is derived from the analogy of the reading of the *tan* 覃 rhyme characters 暗 諳 [am].

4.9.2 *Ji* 緝 rhyme

		<i>kaikou</i> div.3		<i>kaikou</i> type A of div.3	<i>kaikou</i> type B of div.3
	<i>Qieyun</i>	ip		ip	^v ip
	<i>HMJH</i>	ip	ip	ip	ip
見	k				kip 給級汲
溪	k ^h				ip 泣
影	ʔ			ip 揖 ²⁵⁹ 挹 ²⁶⁰	ip 邑浥
曉	h				hip 吸
來	l	lip 粒笠立笠			
澄	ɖ	t ^h ip 蟄			

²⁵⁹ YH,NE,SG[ip]

²⁶⁰ YH,SG[ip]

清	t ^h		tsip 緝 ²⁶¹		
從	dz	tsip 集	tsip 楫 ²⁶²		
邪	z		sip 習 ²⁶³		
莊	tʂ		tsip 戢		
禪	dz	sip 十			

The 3/3A division *ji* 緝 rhyme is represented as [ip] or [ɪp]. The 3B division *ji* 緝 rhyme is represented as [ɪp].

4.9.3 Summary

The mainstream representation of the *shen* 深 rhyme group is listed as below.

(40)

	侵		緝	
	<i>kaikou</i> div.3(A)		<i>kaikou</i> type B of div.3	<i>kaikou</i> type B of div.3
<i>Qieyun</i>	im		^y im	ip
<i>HMJH</i>	other	Retroflex fricative and affricate		
	im	ʌm	im	ip

4.10 Shan 山 rhyme group

4.10.1 Han 寒 rhyme and huan 桓 rhyme

(41)

		寒	曷	桓	末
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²⁶¹ YH,SG,HD,SU, GJ[tsip]

²⁶² YH,SE,SG[tsip].

²⁶³ YH,CJM,NE,SE,IG,SG,SH,HD,SU,GJ[sip].

		<i>kaikou</i> div.1	<i>kaikou</i> div.1	<i>hekou</i> div.1		<i>hekou</i> div.1	
	<i>Qieyun</i>	an	at	^w an		^w at	
	<i>HMJH</i>	an	al	an	oan,ən, uən	al	oal
幫	p					pal 鉢	
滂	p ^h			pan 泮	pən 潘 ²⁶⁴	pal 醃	
並	b			pan 伴盤 癥蟠		pal 鉞	
明	m			man 漫 幔蔓縵縵縵 輓		mal 抹 沫𣎵	
見	k	kan 稭筴幹干 肝竿奸漣 han 肝趕	kal 葛 hal 割		koan 管 轄盥館 鶴罐觀 官棺冠 莞涓觀		koal 括筈 菰
溪	k ^h	kan 看	kal 渴				hoal 蛞
疑	ŋ	an 岸	al 杅				
影	ʔ	an 案鞍			oan 腕腕 惋 uən 盃	al 幹 ²⁶⁵	
曉	h				hoan 獾		
匣	ɦ	han 旱悍鋐𪔐 汗翰跋寒	kal 𪔐		hoan 換 𪔐茺萑		
端	t	tan 担 疸旦簞禪丹		tan 鍛礮			
透	t ^h	t ^h an 炭灘攤擻	tal 撻獺 闔韃	tan 湍獬			
定	d	t ^h an 袒 t ^h an 彈 tan 壇	tal 蓬	tan 段		t ^h al 奪	
泥	n			nan 暖			
來	l	lan 嬾瀾欄蘭	lal 辣糲	lan 卵鸞			
精	ts	ts ^h an 讚	ts ^h al 撻	ts ^h an 鑽			

²⁶⁴ *HD,SU,GJ*[pan]²⁶⁵ *YH*[al]

清	t ^h			ts ^h an 纂鑣驢			
心	s	san 傘撒珊		san 算酸狻 餒	suən 蒜 266		

The *han* 寒 rhyme and the *he* 曷 rhyme are represented as [an] and [al] respectively. The *huan* 桓 rhyme is represented as [an] or [oan] according to the place of articulation. It is represented as [an] for labial, alveolar initials and as [oan] elsewhere. The notation of *suan* 蒜 in *HMJH* is the same as the Chinese reading [suən] in the book *SSTH*, a Chinese textbook compiled by Choe Sejin (1473–1542). The [suən] reading is probably a reflection of the Chinese reading in Choe's time. The *mo* 末 rhyme is represented as [al] or [oal] according to the place of articulation. It is represented as [al] for labial, alveolar initials and as [oal] elsewhere.

4.10.2 *Shan* 山 rhyme

(42)

		山	黠	山	黠
		<i>kaikou</i> div.2	<i>kaikou</i> div.2	<i>hekou</i> div.2	<i>hekou</i> div.2
	<i>Qieyun</i>	^v ɛn	^v ɛt	^{wv} ɛn	^{wv} ɛt
	<i>HMJH</i>	an	al	oan	oal
幫	p	pan 扮	p ^h al 八		
並	b	p ^h an 瓣			
見	k	kan 簡澣澣間	al 鵠 kal 圻	hoan 鰓	
溪	k ^h	kan 慳			
疑	ŋ	an 眼			

²⁶⁶ *HD*[suən], *SU*, *GJ* [san]

匣	ɦ	kan 癩 han 閑			hoal 猾
澄	ɖ	tʰan 綻			
莊	tʂ	tsan 盞			
崇	dʒ	tsan 棧	tsʰal 釧		
生	ʂ	san 產驢山疝	sal 殺		

The *kaikou shan* 山 rhyme and the *hekou shan* 山 rhyme are represented as [an] and [oan] respectively. The *kaikou xia* 黠 rhyme is represented as [al]. The only *hekou xia* 黠 rhyme character in *HMJH* is 猾[hoal]. Below I have listed some *shan* rhyme or *xia* 黠 rhyme characters in other sources: 幻 [hoan] (*YP, SE*), 滑 [hoal] (*YP*).

4.10.3 *Shan* 刪 rhyme

(43)

		刪		鎋	刪		鎋
		<i>kaikoudiv.2</i>		<i>kaikoudiv.2</i>	<i>hekoudiv.2</i>		<i>hekoudiv.2</i>
	<i>Qieyun</i>	ʏæn		ʏæt	wʏæn		wʏæt
	<i>HMJH</i>	an	oan	al	oan	an	oa
幫	p	pʰan 板 pan 盤					
明	m	man 蠻					
見	k	kan 澗諫	koan 菅		koan 關		
疑	ŋ	an 贗鴈 顏				lan 蘭	
影	ʔ	an 晏				man 彎 ²⁶⁷	
曉	h			hal 瞎			

²⁶⁷ *HD, OP*[oan] popular reading[man], *SU, GJ*[oan].

匣	ɦ	han 軒		hal 轄	hoan 宦 𡩊 𡩊 環 寰 鬢		
初	tɕʰ	san 簪		tsʰal 刹			
崇	dzɿ					tsʰan 饌 ²⁶⁸	
生	ɕ	san 訕			soan 孿 櫬		soa 刷 ²⁶⁹

The *kaikou shan* 刪 rhyme is represented as [an]. The reading of 菅 [koan] is derived from the analogy of the reading of the *huan* 桓 rhyme characters 官管 [koan]. The *hekou* 刪 rhyme is represented as [oan]. The *kaikou xia* 鎋 rhyme is represented as [al]. The only *hekou xia* 鎋 rhyme character *shua* 刷 in *HMJH* is represented as [soa]. The native Korean annotation for this character is [soa. tsʌ], which is a loanword from Chinese *shuazi* 刷子 "brush". The [t] coda in MC is always consistently represented as [l] in SK. This [soa] reading is obviously derived from Old Mandarin, in which the [t] coda has already disappeared.

4.10.4 *Xian* 仙 rhyme

(44)

		<i>kaikou</i> div.3	<i>kaikou</i> div.3A	<i>kaikou</i> div.3B		<i>hekou</i> div.3	<i>hekou</i> div.3A	<i>hekou</i> div.3B	
	<i>Qieyun</i>	iɛn	iɛn	ʷiɛn		ʷiɛn	ʷiɛn	ʷyɛn	
	<i>HMJH</i>	iən	iən	ən	iən	iən	iən	uən	oan
幫	p		pʰiən 鞭						
滂	pʰ		pʰiən 騙 篇						

²⁶⁸ YH, NE[tsʰan]

²⁶⁹ YH[sal], HD, SU, GJ[soal]

並	b		p ^h iən 便		piən 辯弁				
明	m		miən 面綿		miən 婉冕				
見	k			kən 蹇淺	kiən 団		kiən 絹	kuən 眷卷	
溪	k ^h		kiən 譴	kən 攘					
群	g			kən 乾				kuən 拳權	koan 顴
影	ʔ			ən 鰓					
云	ɦ							uən 院 衍員	
來	l	liən 輦鯁							
知	t	tiən 驥				tiən 轉			
澄	ɖ	tiən 塵				iən 椽			
娘	ŋ	niən 碾							
精	ts	tsiən 剪 箭煎 ts ^h iən 韃							
從	ɖz	tsiən 餞錢 ts ^h iən 踐賤				iən 吮 ts ^h iən 泉			
心	s	siən 癰癰 薛獮線 仙仙							
邪	z	iən 涎				siən 旋			
章	tɕ	tsiən 戰 𩶒𩶒鸛				tsiən 甄			
昌	tɕ ^h					ts ^h iən 喘 釧穿川			
禪	ɖz	siən 善鱧 蟪蟬鱧				ts ^h iən 喘 簫			
書	ɕ	siən 駙扇 tsiən 羶							
船	ʐ					siən 船			
日	ɻ					ziən 蠕			

						莢梗擱			
以	j	iən 蜒筵				iən 鳶鉛			

The 3/3A division *kaikou xian* 仙 rhyme is represented as [iən]. The 3B division *kaikou xian* 仙 rhyme is generally represented as [ən] and as [iən] when the initial is labial. The 3/3A division *hekou xian* 仙 rhyme is represented as [iən]. The 3B division *hekou xian* 仙 rhyme is represented as [uən] generally. The reading of 顴 [koan] is derived from the analogy of the *huan* 桓 rhyme characters 顴顴 [koan].

4.10.5 *Xue* 薛 rhyme

(45)

		<i>kaikou</i> div.3	<i>kaikou</i> type A of div.3	<i>kaikou</i> type B of div.3		<i>hekou</i> div.3
	<i>Qieyun</i>	i _{ET}	i _{ET}	y _{iET}		w _{iET}
	<i>HMJH</i>	iəl	iəl	əl	iək	iəl
幫	p		piəl 鼃鼃			
明	m		miəl 滅滅			
見	k		hiəl 子			
群	g			kəl 傑		
疑	ŋ			əl 孽 əl 闌	piək 藥 ²⁷⁰	
來	l	liəl 蜩烈鴛				liəl 劣
知	t	tʰiəl 哲				tʰiəl 啜
心	s	siəl 瘡				siəl 雪
章	tɕ	tsiəl 靽				tsiəl 悅

²⁷⁰ HD,SU,GJ[əl]

書	ɕ					siəl 說
船	ʐ	siəl 舌				
日	ŋ					siəl 藟

The 3/3A division *kaikou xue* 薛 rhyme and the 3B division *kaikou xue* 薛 rhyme are represented as [iəl] and [əl] respectively. The 3/3A division *hekou xue* 薛 rhyme is represented as [iəl]. The reading of 藟 [piək] is probably derived from analogy although it is unclear which character is the source of analogy.

4.10.6 Yuan 元 rhyme

(46)

		元	月		元		月	
		<i>kaikoudiv.3</i>	<i>kaikoudiv.3</i>		<i>hekoudiv.3</i>		<i>hekoudiv.3</i>	
	<i>Qieyun</i>	iɤn	iɤt		ʷiɤn		ʷiɤt	
	<i>HMJH</i>	ən	əl	al	uən	an,oan	uəl	al,əl
非	f				pən 藩	p ^h an 阪販 販		pal 髮
敷	f ^h				pən 蕃 幡 幡			
奉	v				pən 燔 繁 攀 攀	pan 飯	pəl 罰 筏 馱 疇	
微	ɱ					man 晚 萬		mal 襪
見	k	kən 健 韃		kal 羯 al 訃 ²⁷¹			kuəl 蹶 蕨 鰈 瘕	
溪	k ^h						kuəl 闕	

²⁷¹ YH[al], HD,OP[kal](popular reading[al]), SU,GJ[kal]

群	g	kən 鍵		kal 碣	kuən 圈		kuəl 櫟	
疑	ŋ	ən 言			uən 原龜 荒虬		uəl 月 月	
影	ʔ	ən 堰			uən 苑鴛 冤琬	oan 碗 ²⁷²		əl 噉
曉	h	hən 獻軒	həl 蠍		huən 植萱 暄貍			
云	ɦ				uən 遠猿 園垣轅猿		uəl 鉞	

The *kaikou yuan* 元 rhyme is generally represented as [ən]. The *hekou yuan* 元 rhyme is generally represented as [uən], and [ən]/[an] for labial initials. The *Kaikou yue* 月 rhyme is represented as [əl] or [al]. The *hekou* 月 rhyme is generally represented as [uəl], and [əl]/[al] for labial initials. The reading of 碗 [oan] is derived from the analogy of the reading of the *huan* 桓 rhyme characters 完碗 [oan]. According to Pak (1971:156), the readings of the following characters result from analogy.

(47)

	Reading	Source of analogy	Rhyme
羯	kal	曷	<i>he</i> 曷
阪販販飯	p ^h an	扳販	<i>shan</i> 刪
髮	pal	跋越拔	<i>mo</i> 末
晚	man	輓挽	<i>huan</i> 桓
襪	mal	濺糲	<i>mo</i> 末

4.10.5 *Xian* 先 rhyme

(48)

²⁷² HD,SU,GJ[uən]

		先	屑				先	屑
		<i>kaikoudiv.4</i>	<i>kaikoudiv.4</i>				<i>hekoudiv.4</i>	<i>hekoudiv.4</i>
	<i>Qieyun</i>	en	et				^w en	^w et
	<i>HMJH</i>	iən	iəl	il	il	iəi	iən	iəl
幫	p	p ^h iən 編 piən 邊菡						
並	b	p ^h iən 編 piən 玼						
明	m	miən 眠麵	miəl 篋蟻					
見	k	kiən 繭襴趺 鍵見肩鵲 hiən 筧	kiəl 鍔𢶏	kil 桔 ²⁷³ 苦 ²⁷⁴			kiən 吠	
溪	k ^h						kiən 犬	
疑	ŋ	iən 硯研妍	iəl 霓 hiəl 齧					
影	ʔ	iən 嚙鸞宴 煙咽咽淵				iəi 螭		
曉	h	hiən 蜺						hiəl 血
匣	ɦ	hiən 峴覓賢 弦絃縣		hil 翹 ²⁷⁵	hil 齧𦵏		hiən 玄銜	hiəl 穴
端	t	tiən 典巔癲						
透	t ^h	t ^h iən 天	t ^h iəl 餐鐵					
定	d	tiən 殿澱電 淀甸奠𦵏癡 𦵏田		til 埵 ²⁷⁶ 跌 ²⁷⁷				
泥	n	niən 撚年	niəl 捏					
來	l	liən 鍊憐蓮						
精	ts	ts ^h iən 薦 tsiən 𦵏箋	tsiəl 癰節					

²⁷³ *HD,SU,GJ*[kiəl]²⁷⁴ In the annotation Choe says that "the standard reading should be [kiəl]". *HD,SU,GJ*[kiəl]²⁷⁵ *HD,SU,GJ*[hiəl]²⁷⁶ *HD,OP*[tiəl](popular reading[til]) *SU,GJ*[tiəl]²⁷⁷ *HD,SU,GJ*[tiəl], *OP*[tiəl] (popular reading[til])

清	tʰ	tsʰiən 蒨千 捲	tsiəl 竊					
從	dʒ	tsiən 前						
心	s	siən 跣霰	siəl 糲 楔					

Both *kaikou xian* 先 rhyme and *hekou xian* 先 rhyme are represented as [iən]. The *kaikou xie* 屑 rhyme and the *hekou xie* 屑 are represented as [iəl] except for the following readings which are derived from analogy: 吉(質 rhyme)> 桔苦 [kil], 翳(齊 rhyme)> 蠟 [iəi], 詰(質 rhyme)> 翹 [hil], 姪侄(質 rhyme)> 埵 [til], 秩佚(質 rhyme)> 跌 [til], 迄屹 (迄 rhyme)> 齧齧 [hil].

4.10.7 Summary

The mainstream representation of the *shan* 山 rhyme group is summarized below.

4.10.6.1 Kaikou

	寒	山	刪	仙		元	先
	<i>kaikou</i> div.1	<i>kaikou</i> div.2	<i>kaikou</i> div.2	<i>kaikou</i> div.3(A)	<i>kaikou</i> type B of div.3	<i>kaikou</i> div.3	<i>kaikou</i> div.4
<i>Qieyun</i>	an	ʷen	ʷæn	iɛn	ʷiɛn	iɤn	en
<i>HMJH</i>					other	labial	
	an	an	an	iən	ən	iən	iən

4.10.6.2 Kaikou with *ru* tone

	曷	黠	鎋	薛		月	屑
	<i>kaikou</i> div.1	<i>kaikou</i> div.2	<i>kaikou</i> div.2	<i>kaikou</i> div.3(A)	<i>kaikou</i> type B of div.3	<i>kaikou</i> div.3	<i>kaikou</i> div.4
<i>Qieyun</i>	at	ʷet	ʷæt	iɛt	ʷiɛt	iɤt	et

<i>HMJH</i>	al	al	al	iəl	əl	əl	iəl
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4.10.6.3 *Hekou*

	桓		山	刪	仙		元	先
	<i>hekou</i> div.1		<i>hekou</i> div.2	<i>hekou</i> div.2	<i>hekou</i> div.3(A)	<i>hekou</i> div.3B	<i>hekou</i> div.3	<i>hekou</i> div.4
<i>Qieyun</i>	^w an		^{wy} æn	^{wy} ɛn	^w iɛn	^{wy} iɛn	^w iɤn	^w en
<i>HMJH</i>	other	velar/ guttural						
	an	oan	oan	oan	iən	uən	uən	iən

4.10.6.4 *Hekou* with *ru* tone

	末		黠	鎋	薛	月	屑
	<i>hekou</i> div.1		<i>hekou</i> div.2	<i>hekou</i> div.2	<i>hekou</i> div.3	<i>hekou</i> div.3	<i>hekou</i> div.4
<i>Qieyun</i>	^w at		^{wy} ɛt	^{wy} æt	^w iɛt	^w iɤt	^w et
<i>HMJH</i>	other	velar/guttural					
	al	oal	oal	oal	iəl	uəl	iəl

4.11 *Zhen* 臻 rhyme group4.11.1 *Hen* 痕 rhyme

(49)

		<i>kaikou</i> div.1	
	<i>Qieyun</i>	ən	
	<i>HMJH</i>	in	ʌn
見	k	kin 根跟	
溪	k ^h	kin 齷	
影	ʔ	in 恩	
匣	ɦ	hin 痕	

透	t ^h		t ^h Λn 吞 ²⁷⁸
---	----------------	--	------------------------------------

The *hen* 痕 rhyme is represented as [in] except in the case of 吞 [t^hΛn]. There are some other *hen* 痕 reading characters which have the [Λn] reading: 恨壑 [hΛn] (YP), 艮 [kΛn] (IG). Pak (1975:200) claims that the [Λn] reading is a layer earlier than [in]. Kōno (1979:470-471) proposed that the vowel [Λ] (Hangul symbol " · ") in Middle Korean was [ə] in Old Korean, and therefore, the [ən] in the source form was adapted as [Λn]. However, as the vowel " · " in Korean underwent a shift from [ə] to [Λ], Korean started to adapt the [ən] in Chinese as [in]. Kōno's explanation is possible, but it is also noteworthy that the [Λn] reading may result from different adaptation strategies proposed by different borrowers. As shown in Chapter 2, the Mandarin -ou [ou] is represented as [ə.u] in the government's transcription and [o.u] in Eom (2002b). Therefore, it is possible that the [Λn] and [in] readings are two different adapted forms of the same source input.

4.11.2 *Zhen* 真 rhyme

(50)

		<i>kaikou</i> div.3		<i>kaikou</i> type A of div.3		<i>kaikou</i> type B of div.3	
	<i>Qieyun</i>	in		in		ʷin	
	<i>HMJH</i>	in	iun	in	iŋ	in	ən, in
幫	p			pin 殯	pin 鬢 ²⁷⁹ 賓 ²⁸⁰		
滂	p ^h						

²⁷⁸ YH, HD, SU, GJ [t^hΛn]

²⁷⁹ YH, HD, SU, GJ [pin]

²⁸⁰ CJM [piŋ] YH, NE, SE, IG, SG, SH, HD, SU, GJ [pin]

並	b			pin 賓 櫛	pin 牝 ²⁸¹ 嬪 ²⁸² 蘋 ²⁸³		pin 貧
明	m			min 泯 民			min 旻
見	k						kən 巾 ²⁸⁴
溪	k ^h						
群	g						
疑	ŋ					in 銀	
影	ʔ			in 印 姻 茵			
曉	h					hin 釁	
來	l	lin 悃 隣 麟 鱗 鄰					
知	t	tin 珍					
澄	ɖ	tin 塵					
精	ts	tsin 進 津					
清	ts ^h	ts ^h in 親					
從	ɗ	tsin 螽					
心	s	sin 信 訊 顛 辛 薪					
邪	z	sin 燼					
章	tɕ	tin 疹 畛 tsin 賑					
禪	dʒ	sin 腎 蜃 臣 晨 宸 辰 鶻	siun 蜃 ²⁸⁵				
書	ʃ	sin 晒 身 紳 娠 伸					
船	ʒ	sin 神					

²⁸¹ SE, IG, SG, HD, SU, GJ[pin]²⁸² SE, SG[pin]²⁸³ YH, SG[pin]²⁸⁴ CJM[kin], SG[kən], HD, OP[kin](popular reading[kən]), SU, GJ[kin]²⁸⁵ HD, SU, GJ[sin]

日	ŋ	zin 刃 仁 人					
以	j	in 蚓 引					

The *zhen* 真 rhyme is generally represented as [in]. 鬢賓 [piŋ] and 牝嬪 [piŋ] are represented as [pin] in *YH*, *HD*, *SU* and *GJ*. The reading of 娠 [siun] probably results from the analogy of the *zhun* 諄 rhyme character 脣 [siun]. 3B division is generally represented as [in], and [in] for labial initials. The reading of 巾 [kən] may be a reflection of Old Chinese (Pak 1971, Kōno 1979), or derived from Old Mandarin (Lee Tonju 1979).

4.11.3 *Zhi* 質 rhyme

(51)

		<i>kaikou</i> div.3		<i>kaikou</i> type A of div.3	<i>kaikou</i> type B of div.3	
	<i>Qieyun</i>	it		it	ʔit	
	<i>HMJH</i>	il	il,iul	il	il	il
幫	p			p ^h il 幫		p ^h il 筆
滂	p ^h			p ^h il 匹		
並	b			p ^h il 秘		
明	m			mil 蜜		
影	ʔ			il 一 壹	il 𪛗	
來	l		liul 栗 ²⁸⁶ 策			
知	t	til 銍				
澄	d	til 姪 帙				
清	t ^h	t ^h il 七				

²⁸⁶ *YH,SE,SH* [niul]

		漆榛				
從	dz	tsil 疾				
心	s	sil 蟋	sil 膝 ²⁸⁷			
章	tɕ	til 蛭蛭 tsil 礪礪				
書	ɕ	sil 室				
日	ŋ	zil 日				
以	j	il 溢				

The 3/3A division *zhi* 質 rhyme is generally represented as [il]. The reading of 栗築 [liul] results from the analogy of the *shu* 術 rhyme characters 律葦 [liul]. There are two 3B division *zhi* 質 rhyme characters in *HMJH*. *Yi* 𪛗 is represented as [il] and *bi* 筆 is represented as [p^hil]. Below I have listed some 3B division *zhi* 質 rhyme characters in other sources: 乙 [il], 弼 [p^hil], 密 [mil] (cited from Ito 2007). The 3B division *zhi* 質 rhyme is represented as [il] when the initial is labial, and as [il] elsewhere.

4.11.4 *Zhen* 臻 rhyme

(52)

		臻	櫛
		<i>kaikou</i> div.3	<i>kaikou</i> div.3
	<i>Qieyun</i>	in	it
	<i>HMJH</i>	in	il
莊	tʂ	tsin 榛 ²⁸⁸	tsil 櫛
初	tʂ ^h	ts ^h in 𪛗 ²⁸⁹	

²⁸⁷ *HG,YH*[sil]

²⁸⁸ *YH,SG*[tsin]

²⁸⁹ *HD,SU,GJ*[ts^hin]

生	ʂ		sil 瑟蝨
---	---	--	--------

The *zhen* 臻 rhyme is represented as [in], and the *zhi* 櫛 rhyme is represented as [il]. Pan and Zhang (2013:6) states that "*zhen* 臻 and *zhi* 櫛 rhyme were in complementary distribution with *zhen* 真 and *zhi* 质 rhyme. The former only co-occur with the initial group *zhuang* 莊 and the latter elsewhere. When rhyme *zhen* 真 occurs with *zhuang* 庄 initial, which are retroflexes, the place of its articulation will move back." The difference between the *zhi* 质 rhyme and the *zhi* 櫛 rhyme in MC is reflected in SK, in which the *zhi* 质 rhyme is represented as [in] while the *zhi* 櫛 rhyme is represented as [il].

4.11.5 Yin 殷 rhyme

(53)

		殷	迄
		<i>kaikou</i> div.3	<i>kaikou</i> div.3
	<i>Qieyun</i>	in	il
	<i>HMJH</i>	in	əl
見	k	kin 謹謹靳斤筋	kəl 吃 ²⁹⁰
溪	k ^h		kəl 乞 ²⁹¹ 肱虺
群	g	kin 近近芹	
疑	ŋ	in 坻斷	
影	ʔ	in 癰	
曉	h	hin 晞昕	

²⁹⁰ *HD, SU, GJ* [kil] *OP* [kil] (popular reading [hɪl])

²⁹¹ *YH, NE* [kəl], *HD, OP* [kil] (popular reading [kəl]) *SU, GJ* [kil]

The *yin* 殷 rhyme is represented as [in], while the *qi* 迄 rhyme is represented as [əl] in *HMJH*. It should be noted that the *qi* 迄 rhyme is also represented as [il] in other sources: 訖 [hil] (*HD, YH, SE*), 迄 [hil] (*SG*). Therefore, there are two types of readings for the *qi* 迄 rhyme, namely [il] and [əl] in Middle SK. The [əl] reading may be derived from the reading in Old Mandarin (Lee 1997:239), or it is possible that the [il] and [əl] readings result from two different adapted forms for the same source input, as Mandarin *gen* [kən] may be transcribed as [kən] in Modern Korean by some borrowers, and as [kuən] by others.

4.11.6 *Hun* 魂 rhyme

(54)

		魂			沒	
		<i>hekou</i> div.1			<i>hekou</i> div.1	
	<i>Qieyun</i>	uon			uot	
	<i>HMJH</i>	un	on	an	ol	ul, ʌl
幫	p	pun 鎗	pon 奮			
滂	p ^h	pun 噴				
並	b	pun 盆				pʌl 鶉脖 賴孥
明	m	mun 門		man 瞞		
見	k	kun 棍	kon 棍滾昆蜢		kol 鶉骨楸	
溪	k ^h		kon 闊 坤			kul 窟 ²⁹²
疑	ŋ				ol 兀	
影	ʔ		on 搵 瘟			

²⁹² *YH*[kul]

曉	h		hon 昏 婚 閭		hol 笏	
匣	fi		hon 混 渾 圉 魂 餽		kol 欄	
端	t		ton 頓 墩 墩		tol 柢	
透	tʰ		ton 褪 墩			
定	d	tun 臀 ²⁹³ 鈍 ²⁹⁴ 屯 ²⁹⁵	ton 沌 囤 豚 鈍		tol 埃	
泥	n					nul 訥 ²⁹⁶
精	ts	tsun 樽 ²⁹⁷	tson 尊		tsol 卒 tsol 碎	
清	tsʰ		tsʰon 寸 村			
從	dz	tsun 蹲 ²⁹⁸	tson 鎛			
心	s		son 孫 蓀 蓀 飧			

The *hun* 魂 rhyme is represented as [on] or [un] generally according to the place of articulation. It is represented as [un] for labial initials and [on] elsewhere. The reading of 棍 [kun] is a reflection of the Chinese reading in *SSTH* (Lee Donju 1980:129). The reading of 瞞 [man] is derived from the analogy of 瞞 [man]. The *mo* 沒 rhyme is generally represented as [ol].

4.11.7 *Zhun* 諄 rhyme

(55)

		諄	術
		<i>hekoudiv.3</i>	<i>hekoudiv.3</i>

²⁹³ *YH,IG*[tun]

²⁹⁴ *HD,SU,GJ*[ton]

²⁹⁵ *IG*[tun]

²⁹⁶ *NE*[nul]

²⁹⁷ *YH,IG*[tsun]

²⁹⁸ *YH,SG*[tsun]

	<i>Qieyun</i>	^w in		^w it	
	<i>HMJH</i>	iun	un	iul	ol
見	k	kiun 麌		kiul 橘	
溪	k ^h	kiun 困			
群	g	kiun 菌			
云	ɦ	kiun 筠			
來	l	liun 輪淪		liul 蓇	
知	t		tun 𪔐 ²⁹⁹		
徹	t ^h	ts ^h iun 椿		t ^h iul 黜	
澄	ɖ			t ^h iul 茱	
精	ts	tsiun 俊儁			
清	ts ^h	tsiun 皴			
心	s	tsiun 隼 siun 筍		hiul 恤 siul 鉞 t ^h iul 誅	
邪	z	siun 旬			
生	ʃ				sol 蟀 ³⁰⁰
章	tɕ	tsiun 準稕	tun 𪔐 ³⁰¹		
昌	tɕ ^h	tsiun 蠹 ts ^h iun 春			
禪	dʒ	siun 醇蓴鶉			
書	ɕ	siun 薜瞬 ³⁰²			
船	ʐ	siun 楯盾		siul 術 t ^h iul 秫	
日	ɳ	ziun 閏			
以	j			hiul 鷗繡	

²⁹⁹ *HD*[tun], *OP*[tsiun](standard reading [tun])

³⁰⁰ *YH,SG,HD*[sol] *OP*[siul](standard reading [sol]) *SU,GJ*[siul]

³⁰¹ *JY*[tsiun]

³⁰² *TG* edition:[sun]

The *zhun* 諄 rhyme is generally represented as [iun]. The *shu* 術 rhyme is represented as [iul]. The reading of 肫 [tun] is derived from the analogy of its phonetic component 屯 [tun], which is a *hun* 魂 rhyme character.

4.11.8 *Wen* 文 rhyme

(56)

		文			物	
	<i>Qieyun</i>	iun			iut	
	<i>HMJH</i>	un	on	in	ul	il
非	f	pun 粉糞分饋				
敷	f ^h					pil 拂 ³⁰³
奉	v	pun 盆幘墳粉漬殯飭焚			pul 佛	
微	ɱ	mun 問豐聞文蚊紋		min 吻 ³⁰⁴		mil 物 ³⁰⁵
見	k	kun 君軍輶蓐				
溪	k ^h				kul 鋸	
群	g	kun 郡裙				
影	ʔ		on 緼醢 ³⁰⁶		ul 蔚熨	
曉	h	hun 訓葷纁勳				
云	ɦ	un 暈錚耘雲				

The *wen* 文 rhyme is generally represented as [un]. The readings of 緼醢 [on] are derived from the analogy of the *hun* 魂 rhyme characters 晙濫[on]. The *wu* 物 rhyme is

³⁰³ *YH,IG,SG*[pil], *HD,SU,GJ*[pul]

³⁰⁴ *HD,SU,GJ*[min]

³⁰⁵ *HG,YH,CJM,SE,IG,SG,JY,SH*[mil], *HD,SU,GJ*[mul]

³⁰⁶ *YH*[on]

generally represented as [ul]. The [il] reading for the *wu* rhyme, according to Lee Yundong (1997:238), may result from the unstable contrast in the feature of [labial roundness] in Old Korean.

4.11.9 Summary

Below is a summary of the mainstream representation of the *zhen* 臻 rhyme group.

4.11.9.1 *Kaikou* with *ping*, *shang* or *qu* tone

	痕	真		臻	殷
	<i>kaikou</i> div.1	<i>kaikou</i> div.3(A)	<i>kaikou</i> type B of div.3		<i>kaikou</i> div.3
<i>Qieyun</i>	ən	in	ʷin		in
<i>HMJH</i>			other	labial	
	in	in	in	in	in

4.11.9.2 *Kaikou* with *ru* tone

	質		櫛	迄
	<i>kaikou</i> div.3(A)	<i>kaikou</i> type B of div.3		<i>kaikou</i> div.3
<i>Qieyun</i>	it	ʷit		il
<i>HMJH</i>		other	labial	
	il	il	il	il

4.11.9.3 *Hekou* with *ping*, *shang* or *qu* tone

	魂		諄	文
	<i>hekou</i> div.1		<i>hekou</i> div.3	<i>hekou</i> div.3
<i>Qieyun</i>	uon		ʷin	iun
<i>HMJH</i>	labial	other		

	un	on	iun	un
--	----	----	-----	----

4.11.9.4 *Hekou* with *ru* tone

	沒	術	物
	<i>hekou</i> div.1	<i>hekou</i> div.3	<i>hekou</i> div.3
<i>Qieyun</i>	uot	^w it	iut
<i>HMJH</i>	ol	iul	ul

4.12 *Dang* 宕 rhyme group4.12.1 *Tang* 唐 rhyme

(57)

		唐	鐸	唐	鐸
		<i>kaikou</i> div.1	<i>kaikou</i> div.1	<i>hekou</i> div.1	<i>hekou</i> div.1
	<i>Qieyun</i>	aŋ	ak	^w aŋ	^w ak
	<i>HMJH</i>	aŋ	ak	oaŋ	oak
幫	p		pak 縛博搏膊		
滂	p ^h		pak 粕搏樂		
並	b		pak 箔		
明	m		mak 幕膜		
見	k	kaŋ 瓠	kak 閣絡	koaŋ 光胱	koak 彌 ³⁰⁷ 榔郭
溪	k ^h	kaŋ 炕穰 haŋ 伉		koaŋ 續壙	koak 簠鄴
疑	ŋ	aŋ 杓	ak 腭鏹萼		
影	ʔ	aŋ 盎	ak 堊惡	oaŋ 汪	hoak 蠖腹
曉	h		hak 壑	hoaŋ 謊	hoak 瘡隳

³⁰⁷HD, SU, GJ[hoak]

匣	ɦ	haŋ 筭行航吭術翊	hak 鶴貉	hoan 幌黃皇 隍凰篁蝗 潢螞	hoak 穫鑊
端	t	taŋ 檔璫觚			
透	tʰ	tʰaŋ 帑錫湯	tʰak 托橐鐐飭託 tʰik 驃 ³⁰⁸		
定	d	tʰaŋ 蕩 taŋ 塘糖堂棠螳 膛塘塘	tʰak 鐸		
泥	n	naŋ 囊囊			
來	l	laŋ 浪狼廊螂稂	lak 駱落珞絡		
精	ts	tsaŋ 葬臧			
清	tsʰ	tsʰaŋ 鶻倉	tsʰak 錯		
從	ɗ		tsʰak 鑿 tsak 柞昨		
心	s	saŋ 頰噪礫瘵桑	tsak 索		

The *kaikou tang* 唐 rhyme is represented as [aŋ], and the *hekou tang* 唐 rhyme is represented as [oan]. The *kaikou duo* 鐸 rhyme is generally represented as [ak] except in the case of 驃 [tʰik]. 驃 [tʰik] is represented as [tʰak] in the *DD* edition *HMJH*. The *hekou duo* 鐸 rhyme is represented as [oak].

4.12.2 Yang 陽 rhyme

(58)

		陽	藥	陽	藥
		<i>kaikou</i> div.3	<i>kaikou</i> div.3	<i>hekou</i> div.3	<i>hekou</i> div.3
	<i>Qieyun</i>	iaŋ	iak	^w iaŋ	^w iak

³⁰⁸ *TG* edition: [tʰak]

	HMJH	aŋ	iaŋ	iak	ak	oaŋ	oak	iak
非	f	paŋ 舫						
敷	f ^h	paŋ 紡						
奉	v	paŋ 房魴						
微	ŋ	maŋ 網輞鋹望						
見	k	kaŋ 襁薑疆姜韁礪韁			kak 腳		hoak 鑊	
溪	k ^h	kaŋ 羌蜣				koaŋ 眶筐閩		
群	g	kaŋ 羶強				koaŋ 誑狂		
疑	ŋ	aŋ 仰			hak 瘡			
影	ʔ	aŋ 秧鴛腴				oaŋ 枉		
曉	h		hiaŋ 饗鄉香					
云	ɦ					oaŋ 王		iak 簍 ³⁰⁹
來	l		liaŋ 兩輛粮櫟 娘梁涼梁	liak 掠				
知	t		tiaŋ 帳張 t ^h iaŋ 脹 t ^h iaŋ 漲	t ^h iak 着				
徹	t ^h		t ^h iaŋ 𨔵					
澄	ɖ		tiaŋ 丈杖腸場					
娘	ŋ		iaŋ 釀 niaŋ 娘孃					
精	ts		tsiaŋ 醬將漿 漿	tsiak 雀				
清	ts ^h	ts ^h aŋ 槍搶	tsiaŋ 將	tsiak 鵲 芍				
從	ɖz		tsiaŋ 匠檣薺 牆牆	tsiak 嚼				
心	s		siaŋ 鯨相 箱廂緹 iaŋ 驤					

³⁰⁹ HD[iak](popular reading[hoak]) SU,GJ[hoak]

邪	z		siaŋ 象橡翔 庠					
莊	tɕ	tsaŋ 粧裝						
初	tɕ ^h		ts ^h aŋ 瘡					
崇	dz	tsaŋ 狀 saŋ 牀						
生	ɕ	saŋ 霜孀						
章	tɕ		tsiaŋ 掌嶂章獐	tsiak 勺 灼繳酌				
昌	tɕ ^h		ts ^h iaŋ 廠唱菖娼 tsiaŋ 幘					
禪	dz		siaŋ 嘗裳上	tsiak 杓 siak 芍				
書	ɕ		siaŋ 觴晌賞商 hiaŋ 餉					
日	ŋ		ziaŋ 攘壤讓 siaŋ 償 iaŋ 襁囊瓢	ziak 箬 iak 弱				
以	j		iaŋ 養養羊陽 洋楊烱	iak 籥鑰 躍爍藥				

The *kaikou yang* 陽 rhyme is represented as [iaŋ] or [aŋ]. It is generally represented as [aŋ] for labial and velar initials, and [aŋ] elsewhere. The reading of 槍搶 [ts^haŋ] is derived from the analogy of the *tang* 唐 rhyme character 倉 [ts^haŋ]. The *hekou yang* 陽 rhyme is represented as [oan]. The *kaikou yao* 藥 rhyme is generally represented as [iak], and as [ak] when the initial is velar. The *hekou yao* 藥 rhyme is represented as [oak]. Below lists some *hekou yao* 藥 rhyme characters in other sources: 矍 [hoak](IG), 攬 [koak] (HD, OP(popular reading [hoak])), 懼 [hoak](HD).

4.12.3 Summary

4.12.3.1 *Kaikou*

	唐	鐸	陽		藥
	<i>kaikou</i> div.1	<i>kaikou</i> div.1	<i>kaikou</i> div.3		<i>kaikou</i> div.3
<i>Qieyun</i>	aŋ	ak	iaŋ		iak
<i>HMJH</i>			velar/labial	other	
	aŋ	ak	aŋ	iaŋ	iak

4.12.3.2 *Hekou*

	唐	鐸	陽	藥
	<i>hekou</i> div.1	<i>hekou</i> div.1	<i>hekou</i> div.3	<i>hekou</i> div.3
<i>Qieyun</i>	^w aŋ	^w ak	^w iaŋ	^w iak
<i>HMJH</i>	oaŋ	oak	oaŋ	oak

4.13 *Jiang* 江 rhyme group4.13.1 *Jiang* 江 rhyme

(59)

		江			覺	
		<i>kaikou</i> div.2			<i>kaikou</i> div.2	
	<i>Qieyun</i>	^ʷ ɔŋ			^ʷ ɔk	
	<i>HMJH</i>	aŋ	iaŋ	oaŋ	ak	ɬk
幫	p	paŋ 邦				
滂	p ^h	p ^h aŋ 胖				
並	b	paŋ 棒蚌			pak 雹鮑 鰕鶼	
明	m	paŋ 厖				
見	k	kaŋ 講淙絳江扛扛			kak 角桷	

		缸 haŋ 港				
溪	k ^h	kaŋ 腔				
疑	ŋ				ak 嶽樂	
影	ʔ				ak 幄	
曉	h	haŋ 肛	hiaŋ 損			
匣	ɦ	haŋ 項巷缸			kak 确	hɿk 鸞 ³¹⁰ 學 ³¹¹
知	t			tsoaŋ 椿 ³¹²	t ^h ak 卓 啄啄瘡	
澄	ɖ	taŋ 幢			t ^h ak 濁	
初	tɕ ^h	ts ^h aŋ 窗				
崇	dzɿ				ts ^h ak 鉞	
生	ɕ	saŋ 瀧		soaŋ 雙 ³¹³	sak 朔槩 嘲	

The *jiang* 江 rhyme is generally represented as [aŋ]. The reading of 損 [hiaŋ] is derived from the analogy of its phonetic component 項 [hiaŋ]. The reading of 椿 [tsoaŋ] and 雙 [soaŋ] is a reflection of Old Mandarin (Pak 1971, Kōno 1979). In *SSTH*, the notation for *chong* 椿 and *shuang* 雙 is [tsoaŋ] and [soaŋ] respectively. The *jue* 覺 rhyme is generally represented as [ak]. The reading of 鸞學 [hɿk] is possibly a reflection of the Chinese when the unclear vowel of the *jue* 覺 rhyme has not changed from [ɔ] to [a] (Lee 1997:148).

4.13.2 Summary

³¹⁰ HD,SU,GJ[hak]

³¹¹ HD,YH,NE,SE,IG,SH[hɿk],CJM[hɿk], JY,SU,GJ[hak]

³¹² HD,SU,GJ[tsaŋ]

³¹³ YH,SG,SU,GJ[saŋ], HD[s*aŋ], OP[saŋ](standard reading: [s*aŋ], popular reading[s*aŋ])

Below summarizes of the mainstream representation of the *jiang* 江 rhyme group.

(60)

	江	覺
	<i>kaikou</i> div.2	<i>kaikou</i> div.2
<i>Qieyun</i>	^y ɔŋ	^y ɔk
<i>HMJH</i>	aŋ	ak

4.14 Zeng 曾 rhyme group

4.14.1 Deng 登 rhyme

(61)

		登	德			登	德	
		<i>kaikou</i> div.1	<i>kaikou</i> div.1			<i>hekou</i> div.1	<i>hekou</i> div.1	
	<i>Qieyun</i>	əŋ	ək			^w əŋ	^w ək	
	<i>HMJH</i>	iŋ	ik	ək	ok, ʌk, ʌik	uŋ	oiŋ	uk
幫	p	piŋ 崩	pik 北					
滂	p ^h							
並	b	piŋ 朋棚棚	pik 陪		pok 葡 ₃₁₄			
明	m		mik 墨					
見	k						koiŋ 肱 ₃₁₅	kuk 國
溪	k ^h				kʌk 刻 ₃₁₆			
曉	h		hik 黑			huŋ 薨 ₃₁₇		
端	t	tiŋ 鐙凳橙燈		tək 德 ₃₁₈				

³¹⁴ *HD*[pok]

³¹⁵ *SE,SG,HD,SU,GJ*[koiŋ]

³¹⁶ *YH,CJM,HD*[kʌk], *SU,GJ*[kʌik]

³¹⁷ *SG*[huŋ]

透	tʰ		tʰik 慝					
定	d	tiŋ 藤騰籐						
泥	n	niŋ 能						
來	l		lik 肋勒 𩺰					
精	ts	tsiŋ 罍罍						
從	ɕ	tsiŋ 贈		tsək 賊 ₃₁₉				
心	s	siŋ 僧			sɿik 塞 ₃₂₀			

The *kaikou deng* 登 rhyme is represented as [iŋ]. There are two *hekou deng* 登 characters: 薨 [huŋ] and 肱 [koŋ]. The reading of 肱 [koŋ] is derived from the analogy of the *geng* 耕 rhyme characters 紘宏[koiŋ]. The *kaikou de* 德 rhyme is generally represented as [ik]. It is represented as [ək] in the following two characters: 德 [tək] and 賊 [tsək]. The [ək] reading is possibly borrowed from Chinese earlier than the [ik] reading (Kōno 1979, Lee 1997). However, it is noteworthy that the [ək] reading and [ik] reading may result from different adaptation strategies of the same source input. The reading of 塞 [sɿik] probably adopted the [ɿi] from the *hai* 哈 rhyme reading of 塞 [sɿi] (Kōno 1979). The reading of 蔔 [pok] is probably derived from the analogy of *wu* 屋 rhyme characters 福匍 [pok]. The *hekou de* 德 rhyme is represented as [kuk] in *HMJH*.

4.14.2 Zheng 蒸 rhyme

(62)

³¹⁸ *HG, YH, CJM, NE, SE, IG, SG, JY, SH*[tək]

³¹⁹ *YH, CJM, SE, SG, HD*[tsək], *OP*[tsik](standard reading [tsək]), *SU, GJ*[tsik]

³²⁰ *YH, CJM, NE, SE, IG, SG, JY*[sɿik]

		蒸		職			職
		<i>kaikou</i> div.3		<i>kaikou</i> div.3			<i>hekou</i> div.3
	<i>Qieyun</i>	iŋ		ik			^w ik
	<i>HMJH</i>	iŋ	iŋ	ik	ik	iək, ʌik, ək, ip	iək
幫	p		piŋ 冰 ³²¹				
滂	p ^h					piək 埴 ³²²	
並	b					p ^h ip 焔 ³²³	
見	k	kiŋ 矜		kik 棘襪			
群	g			kik 極			
影	ʔ	iŋ 鷹膺				ək 億 ³²⁴ 臆	
曉	h						iək 闕
云	ɦ						iək 域 ³²⁵
來	l	liŋ 綾菱陵 蔭					
知	t		tiŋ 徵 ³²⁶				
徹	t ^h				t ^h ik 鵜敕		
澄	ɖ	tiŋ 澄			tik 直		
精	ʈ	tsiŋ 甌		tsik 鯽	tsik 稷		
從	ɗz	tsiŋ 繒					
心	s				sik 息		
莊	tʂ			tʂik 仄		tʂ ^h ʌik 炘 ³²⁷	
初	tʂ ^h			tʂ ^h ik 廁			
生	ʃ					sʌik 穉 ³²⁸ 𦵏 ³²⁹	

³²¹ YH, IG, SG[piŋ]

³²² HD[p^hik], OP[piək](standard reading [p^hik])

³²³ HD[p^hik], OP[piək](standard reading [p^hik]), SUGJ[piək]

³²⁴ YH, SE, IG, SG[ək]

³²⁵ YH, SG[iək]

³²⁶ YH, NE, SE[tiŋ], JY, HD, SU, GJ[tsiŋ]

³²⁷ CJM, SE[tʂ^hʌik], IG[tʂ^hʌik]/[tʂ^hik], HD, 三, 韻, GJ[tʂ^hik]

章	tɕ	tsiŋ 證烝			tsik 織職		
昌	tɕ ^h	ts ^h iŋ 秤					
禪	dz				sik 殖植		
書	ɕ	siŋ 勝勝升			sik 飾式 拭		
船	ʒ	siŋ 乘繩			sik 食蝕		
以	j	siŋ 蠅	iŋ 孕 ³³⁰		ik 翼弋翌 杙		

The *zheng* 蒸 rhyme is generally represented as [iŋ]. The *kaikou zhi* 職 rhyme is generally represented as [ik] or [ɪk] according to the place of articulation. It is represented as [ik] for retroflex, alveolar or palatal initial and [ɪk] elsewhere. The non-mainstream representation of the *kaikou zhi* 職 rhyme includes [iək], [ʌik] and [ək], which may be derived from borrowing from Chinese at different stages (Pak 1971, Kōno 1979). The *hekou zhi* rhyme character is represented as [iək] in *HMJH*.

4.14.3 Summary

Below summarizes the mainstream representation of the *zeng* 曾 rhyme group in *HMJH*.

(63)

	登	德	登	德
	<i>kaikou</i> div.1	<i>kaikou</i> div.1	<i>hekou</i> div.1	<i>hekou</i> div.1
<i>Qieyun</i>	əŋ	ək	^w əŋ	^w ək
<i>HMJH</i>	iŋ	ik	uŋ	uk

³²⁸ *CJM, YH, SE, SG*[sʌik]

³²⁹ *YH, SE*[sʌik]

³³⁰ *YH, SE, IG*[iŋ]

	蒸	職		職
	<i>kaikou</i> div.3	<i>kaikou</i> div.3		<i>hekou</i> div.3
<i>Qieyun</i>	iŋ	ik		^w ik
<i>HMJH</i>	iŋ	ik	ik	iək

4.15 Geng 梗 rhyme group

4.15.1 Geng 庚 rhyme (div.2)

		庚		陌		庚
		<i>kaikou</i> div.2		<i>kaikou</i> div.2		<i>hekou</i> div.2
	<i>Qieyun</i>	^y æŋ		^y æk		^w ^y æŋ
	<i>HMJH</i>	ɿŋ	iəŋ	ɿik	ak	oiŋ
幫	p			pɿik 伯百栢		
滂	p ^h	p ^h ɿŋ 烹		pɿik 魄珀拍		
並	b			pɿik 帛舶白		
明	m	mɿŋ 猛盲虻		mɿik 陌		
見	k	kɿŋ 羹	kiəŋ 梗 ³³¹ 綆 莠梗 ³³² 鷗		kak 骼 ³³³	koiŋ 觥
溪	k ^h	kɿŋ 坑		kɿik 客		
群	g					
疑	ŋ			ɿik 額		
影	ʔ					
曉	h					
匣	ɦ	ɦɿŋ 杏行 脰桁	hiəŋ 衡 ³³⁴			hoiŋ 橫
云	ɦ					
來	l	lɿŋ 冷				

³³¹ YH,SG[kɿəŋ]

³³² HD[kɿəŋ], SU,GJ[kɿiŋ]

³³³ YH,SU[kɿək], HD[kɿək](popular reading[hɿik])

³³⁴ YH,CJM,SE,SG[hiəŋ]

徹	tʰ	tʰɿŋ 撐		tʰɿk 坼		
澄	ɖ		tiəŋ 鋳 ³³⁵	tʰɿk 宅澤		
莊	tʂ			tsʰɿk 笄		
初	tʂʰ	tʰɿŋ 鎗		tsʰɿk 柵		
生	ʂ	sɿŋ 生甥笙銑 甦				

The *kaikou geng* 庚 rhyme (div.2) is generally represented as [ɿŋ]. The [i] in [ɿŋ], according to Pak (1971:169) is due to the fact that the -ng coda in the *geng* 梗 rhyme group contains a palatal [i], namely [iŋ]. The [iəŋ] reading in some characters probably results from analogy, such as 呈(清 rhyme)>鋳[tiəŋ]. Kōno (1979) notes that the [iəŋ] reading may be a reflection of the [jäŋ] form of the *geng* 庚 rhyme in Old Mandarin. The *hekou geng* 庚 rhyme (div.2) is represented as [oiŋ]. The *mo* 陌 rhyme (div.2) is generally represented as [ɿk]. The reading of 髀 [kak] is derived from the analogy of its phonetic component 各 [kak], which is a *duo* 鐸 rhyme character.

4.15.2 *Geng* 庚 rhyme (div.3)

		庚		陌		庚
		<i>kaikou</i> div.3		<i>kaikou</i> div.3		<i>hekou</i> div.3
	<i>Qieyun</i>	ʲjæŋ		ʲjæk		ʷʲjæŋ
	<i>HMJH</i>	iəŋ	ɿŋ	iək	ɿk	iəŋ
幫	p	piəŋ 柄		piək 碧		
並	b	piəŋ 病 pʰiəŋ 坪桴				

³³⁵ HD,SU,GJ[tsiəŋ]

明	m	miəŋ 皿命明鳴	mɿiŋ 盟 ³³⁶			
見	k	kiəŋ 景境敬鏡京蟹 hiəŋ 荊			kik 戟 ³³⁷	
溪	k ^h	kiəŋ 卿		kiək 綌	kik 隙 ³³⁸	
群	g	kiəŋ 鯨檠鯨驚			kik 屐 ³³⁹	
疑	ŋ			iək 唼		
影	ʔ	iəŋ 影映英				
曉	h					hiəŋ 兄
云	ɦ					iəŋ 泳蝶 榮

The *kaikou* 庚 rhyme (div.3) is represented as [iəŋ] except in the case of 盟 [mɿiŋ]. There are two *fanqie* spellings for 盟 [mɿiŋ] in *Jiyun* 集韻. The first reading is *meibing* 眉兵, a third division *geng* 庚 rhyme with a *ping* tone, while the second reading is *mogeng* 莫更, a second division *geng* 庚 rhyme with a *qu* tone. The tone notation in *HMJH* for 盟 [mɿiŋ] is one dot, indicating it is a *qu* tone or *ru* tone. The reading for 盟 [mɿiŋ] in *HMJH* is consistent with the *mogeng* 莫更 *fanqie* spelling. The *hekou* 庚 rhyme (div.3) is represented as [iəŋ]. The *kaikou mo* 陌 rhyme (div.3) is represented as [iək] or [ik]. The [ik] reading is probably a reflection of Old Mandarin (Pak 1971, Kōno 1979).

4.15.3 *Geng* 耕 rhyme

(64)

		耕	麥	耕	麥
--	--	---	---	---	---

³³⁶ YH,CJM,SG,HD[mɿiŋ], OP[miəŋ] (standard reading [mɿiŋ]), SU,GJ[miəŋ]

³³⁷ YH[kik]

³³⁸ YH[kik]

³³⁹ YH[kik]

		<i>kaikou</i> div.2			<i>kaikou</i> div.2		<i>hekou</i> div.2	<i>hekou</i> div.2
	<i>Qieyun</i>	^y εη			^y εk		^{wy} εη	^{wy} εk
	<i>HMJH</i>	iəη	Λiη	ïη	Λik	iək	oiη	oik, uk
幫	p			pïη 繡 340 棚 341		piək 薜		
明	m	miəη 黽 342	mΛiη 萌氓甍		mΛik 脈 mai 麥			
見	k	kiəη 耕 343				kiək 隔 隔 hiək 革 344		koik 鹹 kuk 轔 蠅 345
影	ʔ	iəη 𪛗 346	Λiη 鸚鶯 櫻		Λik 輓隘			
匣	ɦ		kΛiη 莖		hΛik 覈核	kiək 翮 347	koiη 紘	
知	t					tiək 滴 348		
莊	tʂ		tsΛiη 筭諍		ts ^h Λik 讀	tsiək 幘 349		
初	tʂ ^h				ts ^h Λik 策冊			

The *kaikou* 耕 rhyme (div.2) is generally represented as [Λiη]. The reading of 繡棚 [piη] is derived from the analogy of the *deng* 登 rhyme characters 朋棚棚 [piη]. The *kaikou* mai 麥 rhyme is represented as [Λik] or [iək]. The [iək] reading is probably derived from analogy, such as 嫡滴(錫 rhyme)>滴[tiək], 鬲篙(錫 rhyme)>隔翻隔[kiək], etc. There are

³⁴⁰ HD[piη], SU,GJ[p^hΛiη]

³⁴¹ HD,SU,GJ[p^hΛiη]

³⁴² HD,SU,GJ[p^hΛiη]

³⁴³ YH,IG,SG[kiəη]

³⁴⁴ YH,SE,IG,SG,JY,SH[hiək], HD,OP[kiək](popular reading[hiək]), SU,GJ[kiək]

³⁴⁵ HD[kuik], OP[koik](standard reading kuik),SU,GJ[koik]

³⁴⁶ HD,SU,GJ[Λiη]

³⁴⁷ HD,SU,GJ[hΛik]

³⁴⁸ YH[tiək], HD,SU,GJ[tsiək]

³⁴⁹ YH[tsiək] HD,SU,GJ[ts^hiək], OP[ts^hiək](popular reading[tsiək])

three *hekou mai* 麥 rhyme characters in *HMJH*: 馘 [koik], 𩚑 [kuk], and 𩚒 [kuk]. 𩚒 [kuk] is represented as [koik] in *SU* and *GJ*. The reading of 𩚒 [kuk] is derived from the analogy of its phonetic component 國 [kuk].

4.15.4 *Qing* 清 rhyme

(65)

		清		昔			清		昔
		<i>kaikou</i> div.3	<i>kaikou</i> typeA of div.3	<i>kaikou</i> div.3		<i>kaikou</i> type A of div.3	<i>hekou</i> div.3	<i>hekou</i> div.3A	<i>hekou</i> div.3
	<i>Qieyun</i>	iɛŋ	iɛŋ	iɛk		iɛk	^w iɛŋ	^w iɛŋ	^w iɛk
	<i>HMJH</i>	iəŋ	iəŋ	iək	ɿik	iək	iəŋ	iəŋ	iək
幫	p		piəŋ 餅			piək 璧 襞辟			
並	b					piək 闕			
明	m							miəŋ 名	
見	k							kiəŋ 頸	
溪	k ^h							kiəŋ 𦵏 傾	
群	g							kiəŋ 瓊	
影	ʔ							iəŋ 癭 纓纓嬰	
來	l	liəŋ 嶺領 令							
知	t	tiəŋ 貞							
徹	t ^h	tiəŋ 𧈧𧈧 𧈧							
澄	ɖ	tiəŋ 呈程		t ^h iək 擲 𧈧					

精	ts	tsiəŋ 井精 tsʰiəŋ 菁晴		tsʰiək 脊鵲 tsiək 積跡					
清	tsʰ	tsʰiəŋ 清圉		tsʰiək 刺 tsiək 磧					
從	dʒ	tsiəŋ 穽情 tsʰiəŋ 晴		tsʰiək 瘡堵 tsiək 籍					
心	s	siəŋ 姓性 猩		siək 昔瀉礪 腊舄					
邪	z	siəŋ 錫		siək 夕席汐 窆叻					
章	tɕ	tsiəŋ 政鉦鉗		tsʰiək 隻 tsiək 炙					
昌	tɕʰ			tsʰiək 尺斥𧈧 tsiək 赤					
禪	dʒ	siəŋ 誠城 盛箴		siək 石 鉍					
書	ʃ	siəŋ 聖聲		siək 螯					
以	j	piŋ 桺 ³⁵⁰ iəŋ 羸楹		hiək 弈 iək 易 繹驛 tʰiək 蜴	ɬik 液 ³⁵¹ 腋 ³⁵² 掖		iəŋ 顙營		iək 役 疫蓂

The *kaikou qing* 清 rhyme (div.3) and the *hekou qing* 清 rhyme (div.3) in *HMJH* are generally represented as [iəŋ]. The *kaikou xi* 昔 rhyme (div.3) and the *hekou xi* 昔 rhyme (div.3) in *HMJH* are generally represented as [iək]. The reading of 液腋掖 [ɬik] may results from the fact that in many rhyme books, such as *pingshui yun* 平水韻 and

³⁵⁰ *HD*[iəŋ], *SU, GJ*[iŋ], *OP*[iŋ](standard reading [iəŋ])

³⁵¹ *YH*[ɬik]

³⁵² *YH*[ɬik]

Hongwu zhengyun 洪武正韻, 液腋掖 [ɿk] is always placed under the *mo* 陌 rhyme category.

4.15.5 *Qing* 青 rhyme

(66)

		青	錫		青
		<i>kaikou</i> div.4	<i>kaikou</i> div.4		<i>hekou</i> div.4
	<i>Qieyun</i>	eŋ	ek		^w eŋ
	<i>HMJH</i>	iəŋ	iək	ik, ɿk, ik	iəŋ
幫	p		piək 壁		
滂	p ^h		piək 霹		
並	b	piəŋ 瓶屏駢 p ^h iəŋ 萍	piək 髒		
明	m	miəŋ 茗暝模瞑			
見	k	kiəŋ 徑經	kiək 壑		kiəŋ 局
溪	k ^h	kiəŋ 磬		kik 喫 ³⁵³	
疑	g			ɿk 鷗 ³⁵⁴	
影	ŋ				
曉	ʔ	hiəŋ 馨			
匣	h	hiəŋ 脛刑形型硯	hiək 覲		hiəŋ 螢
云	f				
端	t	tiəŋ 頂鼎錠釘顚丁釘疔	tiək 嫡嫡酌 躋葯杓		
透	t ^h	tiəŋ 汀鞞 t ^h iəŋ 廳聽	t ^h iək 趯		
定	d	tiəŋ 艇亭庭廷聍蜓	tiək 荻 敵笛狄羅覲		

³⁵³ YH[kik]

³⁵⁴ YH[ɿk] HD[ik] OP[iək](standard reading [ik], popular reading[il]), SU,GJ[iək]

泥	n	niəŋ 佞		nik 溺 ³⁵⁵	
來	l	liəŋ 鈴伶零囡 嚮聆玲鸚瓚翎靈	liək 曆癘歷 霽癘	lik 櫟 ³⁵⁶ 磔 ³⁵⁷	
精	ts		tsiək 勣績		
清	tsʰ	tsʰiəŋ 青鯖蜻	tsʰiək 戚鍼		
心	s	siəŋ 星鯉	siək 錫淅蜥 tʰiək 惕		

Both the *kaikou qing* 青 rhyme and the *hekou qing* 青 rhyme are represented as [iəŋ]. The *xi* 錫 rhyme is generally represented as [iək]. The reading of 鷁 [ɿk] is derived from the analogy of *mai* 麥 rhyme characters 搯𪛗 [ɿk] (Lee 1997:198).

4.15.6 Summary

Below summarizes the mainstream representation of the *geng* 庚 rhyme group in *HMJH*.

4.15.5.1 *Kaikou* with *ping*, *shang* or *qu* tone

	庚	庚	耕		清	青
	<i>kaikou</i> div.2	<i>kaikou</i> div.3	<i>kaikou</i> div.2		<i>kaikou</i> div.3(A)	<i>kaikou</i> div.4
<i>Qieyun</i>	ʷæŋ	ʷjæŋ	ʷɛŋ		iɛŋ	eŋ
<i>HMJH</i>	ɿiŋ	iəŋ	ɿiŋ	iəŋ	iəŋ	iəŋ

4.15.5.2 *Kaikou* with *ru* tone

	陌	陌	麥	昔	錫
	<i>kaikou</i> div.2	<i>kaikou</i> div.3	<i>kaikou</i> div.2	<i>kaikou</i> div.3(A)	<i>kaikou</i> div.4

³⁵⁵ YH[nik]

³⁵⁶ SG[lik], HD,SU,GJ[liək]

³⁵⁷ HD,SU,GJ[liək]

<i>Qieyun</i>	^y æk	^y jæk	^y ɛk		iɛk	ek
<i>HMJH</i>	ɿk	iək	ɿk	iək	iək	iək

4.15.5.3 *Hekou* with *ping*, *shang* or *qu* tone

	庚	庚	耕	清	青
	<i>hekou</i> div.2	<i>hekou</i> div.3	<i>hekou</i> div.2	<i>hekou</i> div.3(A)	<i>hekou</i> div.4
<i>Qieyun</i>	^w yæŋ	^w yjæŋ	^w yɛŋ	^w iɛŋ	^w eŋ
<i>HMJH</i>	oiŋ	iəŋ	oiŋ	iəŋ	iəŋ

4.15.5.4 *Hekou* with *ru* tone

	麥	昔
	<i>hekou</i> div.2	<i>hekou</i> div.3
<i>Qieyun</i>	^w yɛk	^w iɛk
<i>HMJH</i>	oik	iək

4.16 *Tong* 通 rhyme group

4.16.1 *Dong* 東 rhyme

(67)

		東	屋	東				屋		
		<i>hekou</i> div.1	<i>hekou</i> div.1	<i>hekou</i> div.3				<i>hekou</i> div.3		
	<i>Qieyun</i>	uŋ	uk	juŋ				juk		
	<i>HMJH</i>	oŋ	ok	iuŋ	uŋ	oŋ	ioŋ	iuk	uk	ok
幫	p		pok 卜							
滂	p ^h		pok 醜							
並	b	poŋ 蓬 篷	pok 僕							

明	m	mon 矇 蠓	mok 木 沐			mon 夢 ³⁵⁸				mok 目 苜 牧鵠
非	f				p ^h un 諷 楓 風 颶					pok 幅 福 腹 蝠 辐
敷	f ^h				p ^h un 豐					pok 蝮
奉	v					pon 鳳 ³⁵⁹				pok 服鵬
見	k	kon 貢 功 公 工 蚣	kok 谷 穀 穀		kun 宮 弓 躬				kuk 鞠 菊 掬 鵠	
溪	k ^h	kon 孔 鞞 蛭	kok 哭		kun 穹				kuk 麴	
影	ʔ	on 塢 龔 甕 翁 螽 翰	ok 屋						uk 桷 燠	
匣	ɸ	hon 聃 永 閏 紅 洪 虹 鴻 烘 筭 葑	kok 穀 榘 斛							
云	ɸ				un 雄 熊					
端	t	ton 蝮 凍 棟 涇 束 蠱								
透	t ^h	t ^h on 桶 痛	tok 禿 鵠							
定	d	ton 動 峒 衙 桐 瞳 童 銅 僮	tok 牘 犢 髑 犢 讎 瀆 獨 讀							
泥	n	non 鼃								
來	l	lon 籠 寵 聾 櫛 隴 隴 寵	lok 輓 鹿 麓 漚 礪 麓 潑	liun 隆				liuk 陸 六		

³⁵⁸ YH,SE[mon]³⁵⁹ YH,CJM,SE [pon]

			nok 祿							
知	t			tiuŋ 中 t ^h iuŋ 忠衷				tiuk 竹 t ^h iuk 築		
澄	d			tiuŋ 蚱 t ^h iuŋ 沖蟲 翀				t ^h iuk 軸逐 柚舳 舳		
精	ts	tsoŋ 髮 鰓	tsok 鏃							
清	t ^{sh}	t ^{sh} oŋ 葱 囟聰								
從	dz	t ^{sh} oŋ 叢	tsok 族							
心	s						sioŋ 崧 ³⁶⁰ 賊 ³⁶¹	siuk 夙 蓐		
章	tɕ						tsioŋ 終 ³⁶² 蠱 ³⁶³	tsiuk 粥		
昌	tɕ			t ^{sh} iuŋ 銃 莧						
禪	tɕ ^h							siuk 熟孰 淑塾		
書	dz							siuk 叔菽		
日	tɕ			ziuŋ 戎				ziuk 肉		
以	tɕ ^h							iuk 育 鬻毓		

The *dong* 東 rhyme (div.1) is represented as [oŋ]. The *dong* 東 rhyme (div.3) is generally represented as [iuŋ] or [uŋ] according to the place of articulation. It is represented as [uŋ]

³⁶⁰ HD[sioŋ] SU,GJ[siuŋ]

³⁶¹ HD[sioŋ] SU,GJ[siuŋ]

³⁶² HG,CJM,YH,NE,SE,IG,SG,JY[tsioŋ]

³⁶³ SG[tsioŋ]

for velar and glottal, and [iuŋ] elsewhere. The *wu* 屋 rhyme (div.1) is represented as [ok].

The *wu* 屋 rhyme (div.3) is represented as [iuk], [ok] or [uk] according to the place of articulation. It is represented as [ok] for labial initials, [uk] for velar and glottal initials and [iuk] elsewhere.

4.16.2 *Dong* 冬 rhyme

(68)

		冬	沃
		<i>hekou</i> div.1	<i>hekou</i> div.1
	<i>Qieyun</i>	oŋ	ok
	<i>HMJH</i>	oŋ	ok
見	k		kok 梏
影	ʔ		ok 沃鑒
匣	ɦ		kok 鵠
端	t	toŋ 冬	
透	tʰ	tʰoŋ 統	
定	d	toŋ 疼彤	tok 轟礪
泥	n	noŋ 膿農	
精	ts	tsoŋ 綜 tʰoŋ 宗	

The *dong* 冬 rhyme and the *wo* 沃 rhyme are represented as [oŋ] and [ok] respectively in *HMJH*.

4.16.3 *Zhong* 鍾 rhyme

(69)

		鍾			燭		
		<i>hekou</i> div.3			<i>hekou</i> div.3		
	<i>Qieyun</i>	juoŋ			juok		
	<i>HMJH</i>	ioŋ	oŋ	iuŋ, oəŋ	iok	ok	uk
敷	f ^h		poŋ 捧蜂鋒烽 丰峯				
奉	v		poŋ 縫			pok 幞	
見	k		koŋ 拱恭筍				
溪	k ^h					kok 曲蚰肱	
群	g		koŋ 蜚				kuk 局 ³⁶⁴
疑	ŋ					ok 獄玉	
影	ʔ		oŋ 壅癰饗鵠				
曉	h			hiuŋ 胸 ³⁶⁵			uk 旭 ³⁶⁶
來	l		loŋ 壘龍			lok 綠	
知	t	t ^h ioŋ 塚					
徹	t ^h	t ^h ioŋ 寵			t ^h iok 躡		
娘	ŋ		noŋ 醴				
精	ʈ	tsioŋ 蹤			tsiok 足		
心	s		soŋ 駮			sok 粟	
邪	z	sioŋ 頌誦 訟松					
章	tɕ	tsioŋ 種 腫踵種鐘 鍾			ts ^h iok 燭		
昌	tɕ ^h				ts ^h iok 觸		
書	ɕ	sioŋ 春		tsoaŋ 驢 ³⁶⁷			
船	ʐ				siok 贖		

³⁶⁴ YH,SG,HD,SU,GJ[kuk]

³⁶⁵ YH,HD,SU,GJ [hiuŋ]

³⁶⁶ SG,HD,SU,GJ[uk]

³⁶⁷ SU,GJ[sioŋ], HD,OP[sioŋ](popular reading[tsoaŋ])

日	ŋ				ziok 褥		
以	j	ion 勇涌 蛹踊埶容 傭鎔墉			iok 浴谷		

The *zhong* 鍾 rhyme is represented as [ion] or [oŋ]. The reading of 驕 [tsoaŋ] is probably a reflection of Old Mandarin (Lee Tonju 1990:81, Lee Yundong 1997:257). The *zhu* 燭 rhyme is generally represented as [iok] or [ok]. The readings of 局 [kuk] and 旭 [uk] probably result from different adaptation strategies. For example, Mandarin -ong[oŋ] is transcribed as [uŋ] in the Korean government's transcription, but as [oŋ] in Eom (2002b). So the same source form may be adapted differently in the borrower's language.

4.16.4 Summary

Below summarizes the mainstream representation of the *tong* 通 rhyme group in *HMJH*.

(70)

	div.1			
	東	屋	冬	沃
<i>Qieyun</i>	uŋ	uk	oŋ	ok
<i>HMJH</i>	oŋ	ok	oŋ	ok

	3 rd division							
	東		屋		鍾		燭	
<i>Qieyun</i>	juŋ		juk		juoŋ		juok	
<i>HMJH</i>	iuŋ	uŋ	iuk	uk	ioŋ	oŋ	iok	ok

4.17 Summary

Based on the above discussion, below is a summary of the representation of Middle Chinese rhymes in *HMJH*.

4.17.1 *Kaikou* 1st division

Rhyme Group	果	蟹		效		咸				山		宕		曾	
Rhyme	歌	哈	泰	豪	侯	覃	合	談	盍	寒	曷	唐	鐸	登	德
<i>Qieyun</i>	a	əi	ai	au	u	əm	əp	am	ap	an	at	aŋ	ak	əŋ	ək
<i>HMJH</i>	a	ɿ	ai	o	u	am	ap	am	ap	an	al	aŋ	ak	iŋ	ik

4.17.2 *Hekou* 1st division

Rhyme Group	果	遇	蟹			山			
Rhyme	戈	模	灰		泰	桓		末	
<i>Qieyun</i>	^w a	uo	uoi		^w ai	^w an		^w at	
<i>HMJH</i>			other	labial		other	Velar Guttural	other	Velar Guttural
	oa	o	oi	ɿ	oi	an	oan	al	oal

Rhyme Group	臻			宕		曾		通			
Rhyme	魂		沒	唐	鐸	登	德	東	屋	冬	沃
<i>Qieyun</i>	uon		uot	^w aŋ	^w ak	^w əŋ	^w ək	uŋ	uk	oŋ	ok
	other	labial									
<i>HMJH</i>	on	un	ol	oan	oak	uŋ	uk	oŋ	ok	oŋ	ok

4.17.3 *Kaikou* 2nd division

Rhyme Group	假	蟹			效	咸		山			
Rhyme	麻	皆	佳	夬	肴	咸	銜	山	黠	刪	鎋
<i>Qieyun</i>	^ɤ æ	^ɤ ɛi	^ɤ ɛ	^ɤ æi	^ɤ æu	^ɤ ɛm	^ɤ æm	^ɤ ɛn	^ɤ ɛt	^ɤ æn	^ɤ æt

<i>HMJH</i>					other	labial						
	a	Λi	ai	ai	io	o	am	am	an	al	an	al

Rhyme Group	江			梗							
Rhyme	江	覺	庚	陌	耕	麥					
<i>Qieyun</i>	^ʋ ɔŋ	^ʋ ɔk	^ʋ æŋ	^ʋ æk	^ʋ ɛŋ	^ʋ ɛk					
<i>HMJH</i>	aŋ	ak	Λiŋ	Λik	Λiŋ/ iəŋ	Λik/ iək					

4.17.4 *Hekou* 2nd division

Rhyme Group	假	蟹			山				梗		
Rhyme	麻	皆	佳	夬	山	黠	刪	鎋	庚	耕	麥
<i>Qieyun</i>	^{wʏ} æ	^{wʏ} ɛi	^{wʏ} ɛ	^{wʏ} æi	^{wʏ} ɛn	^{wʏ} ɛt	^{wʏ} æn	^{wʏ} æt	^{wʏ} æŋ	^{wʏ} ɛŋ	^{wʏ} ɛk
<i>HMJH</i>	a	oi	oai	oai	oan	oal	oan	oal	oiŋ	oiŋ	oik

4.17.5 *Kaikou* 3rd division

Rhyme Group	假	蟹			止					
Rhyme	麻	祭		廢	支			脂		
Division		3/3A	3B		3/3A		3B	3/3A		3B
<i>Qieyun</i>	jæ	jɛi	^ʋ jɛi	jai	iɛ		^ʋ iɛ	i		^ʋ i
<i>HMJH</i>					other	Retroflex/ Alveolar fricative or affricate		other	Retroflex/ Alveolar fricative or affricate	
	ia	iəi	əi	iəi	i	Λ	ii	i	Λ	ii

Rhyme Group	止					效		尤		
Rhyme	之			微		宵		尤		
Division						3/3A	3B	3		
<i>Qieyun</i>	i			ii		iɛu	^ʋ iɛu	iu		
<i>HMJH</i>	other	Velar Guttural	Retroflex/ Alveolar	other	labial			other	Labial, Guttural, Retroflex	

			fricative or affricate						fricative & Affricate
	i	ii	ʌ	ii	i	io	io	iu	u

Rhyme Group	尤	咸					
Rhyme	幽	鹽		葉		嚴	業
Division		3/3A	3B	3/3A	3B		
<i>Qieyun</i>	iu	iɛm	ʷiɛm	iɛp	ʷiɛp	jam	jap
<i>HMJH</i>	iu	iəm	iəm	iəp	iəp	əm	əp

Rhyme Group	深				山					
Rhyme	侵		緝		仙		薛		元	月
Division	3/3A		3B	3/3A	3B	3/3A	3B	3/3A	3B	
<i>Qieyun</i>	im		ʷim	ip	ʷip	iɛn	ʷiɛn	iɛt	ʷiɛt	iɤn
<i>HMJH</i>	other	Retroflex fricative & affricate					other	labial		
	im	ʌm	im	ip	ip	iən	ən	iən	iəl	əl

Rhyme Group	臻						宕			
Rhyme	真(臻)		質(櫛)		殷	迄	陽		藥	
Division	3/3A	3B	3/3A	3B						
<i>Qieyun</i>	in	ʷin	it	ʷit	in	it	iaŋ		iak	
<i>HMJH</i>		other	labial		other	labial		other	labial, velar, guttural	
	in	in	in	il	il	il	in	il	iaŋ	iaŋ

Rhyme Group	曾		梗					
Rhyme	蒸	職	庚	陌	清	昔		
Division					3/3A	3B	3/3A	3B
<i>Qieyun</i>	iŋ	ik	^y jæŋ	^y jæk	iɛŋ	^y iɛŋ	iɛk	^y iɛk
<i>HMJH</i>	iŋ	ik/ik	iəŋ	iək	iəŋ		iək	

4.17.6 *Hekou* 3rd division

Rhyme Group	果	遇					蟹		
Rhyme	戈	魚			虞		祭	廢	
Division							3/3A	3B	
<i>Qieyun</i>	^w ja	jɤ			juo		^w jei	^w yjei	^w jai
<i>HMJH</i>		other	velar guttural	retroflex fricative/affricate	other	labial, velar guttural			
	oa	iə	ə	o	iu	u	iəi		iəi

Rhyme Group	止					咸	
Rhyme	支		脂		微	凡	乏
Division	3/3A	3B	3/3A	3B			
<i>Qieyun</i>	^w iɛ	^w yɛ	^w i	^w yɪ	^w ii	ɰjam	ɰjap
<i>HMJH</i>	iu	uəi/ui	iu	uəi/ui	uəi/ui	əm	əp

Rhyme Group	山					
Rhyme	仙		薛		元	月
Division	3/3A	3B	3/3A	3B		
<i>Qieyun</i>	^w iɛn	^w yɛn	^w iɛt	^w yɛt	^w iɛn	^w iɛt
<i>HMJH</i>	iən	uən	iəl	iəl	uən	uəl

Rhyme Group	臻		宕	曾
-------------	---	--	---	---

Rhyme	諄	術	文	物	陽	藥	職
<i>Qieyun</i>	^w in	^w it	jun	jut	^w iaŋ	^w iak	^w ik
<i>HMJH</i>	iun	iul	un	ul	oaŋ	oak	iək

Rhyme Group	梗						通			
Rhyme	庚	陌	清		昔		東	屋	鍾	燭
Division			3/3A	3B	3/3A	3B				
<i>Qieyun</i>	^w yjæŋ	^w yjæk	^w iɛŋ	^w yɛŋ	^w iɛk	^w yɛk	juŋ	juk	juɔŋ	juɔk
<i>HMJH</i>	iəŋ	-	iəŋ	-	iək	-	iuŋ/uŋ	iuk/ uk	ioŋ/ oŋ	iok/ok

4.17.7 *Kaikou* 4th division

Rhyme Group	蟹	咸		山		梗	
Rhyme	齊	添	帖	先	屑	青	錫
<i>Qieyun</i>	ei	em	ep	en	et	eŋ	ek
<i>HMJH</i>	iəi	iəm	iəp	iən	iəl	iəŋ	iək

4.17.8 *Hekou* 4th division

Rhyme Group	蟹	山		梗
Rhyme	齊	先	屑	青
<i>Qieyun</i>	^w ei	^w en	^w et	^w eŋ
<i>HMJH</i>	iəi	iən	iəl	iəŋ

The above tables show that the rhymes in Middle Sino-Korean have the following features. First, the distinction in *chongniu* 重紐 "rime doublets" is preserved in Middle SK. The contrast between 3A and 3B is significant except in the case of labial initials. For example, 3B division is represented with a [i] sound in *kaikou zhi* 支 rhyme (3A [i],

3B [ii]), *kaikou zhi* 脂 rhyme (3A [i], 3B [ii]), *kaikou zhen* 真 rhyme (3A [in], 3B [in]) and *kaikou qin* 侵 rhyme (3A [im], 3B [im]). The [i] glide in 3A division is dropped in 3B in *kaikou ji* 祭 rhyme (3A [iəi], 3B [əi]), *kaikou xian* 仙 rhyme (3A [iən], 3B [ən]), *kaikou yan* 鹽 rhyme (3A [iən], 3B [ən]), *hekou zhi* 支 rhyme (3A [iu], 3B [uəi]), *hekou zhi* 脂 rhyme (3A [iu], 3B [uəi]), *hekou ji* 祭 (3A [iəi], 3B [ui]) and *hekou xian* 仙 rhyme (3A [iən], 3B [uən]). Zhou Fagao (1989:107) points out that "the 3A division characters and the 3B division characters are not used as the lower characters for *fanqie* mutually in *Jingdian shiwen* 經典釋文 (c. 600), *XYYY* (c.650), *HLYY* (810), Zhu Ao's 朱翱 *fanqie* annotation and *Ji Yun* 集韻 (Early 11th century), indicating that the contrast between div.3A and div.3B existed in Chinese during this long period." The preservation of *chongniu* in Middle SK implies that the main layer of SK was borrowed from Middle Chinese.

Second, due to the phonotactic constraints in Korean, the glides in Middle Chinese are always simplified with the process of adaptation, such as *hekou ma* 麻 rhyme [ʷæ]→[a], *hekou fei* 廢 rhyme [ʷjəi]→[iəi], *hekou yuan* 元 rhyme [ʷiən]→[uən], and *hekou yang* 陽 rhyme [ʷian]→[oan].

Third, other features in the rhymes of Middle SK include keeping the distinction between some double rhymes, keeping the distinction between /p/, /t/ (represented as /l/) and /k/ in the coda position, 4th division rhymes containing a [j] glide and representing *zhi* 止 rhyme group (*jing* 精 initial group and *zhuang* 莊 initial group) with [ʌ] sound. These features can provide us with valuable information about the origin of Modern SK, and thus a detailed discussion on these features will be provided in Chapter 6.

Chapter 5 The Tonal System of Middle Sino-Korean

This chapter will compare the tonal system in Middle Chinese and that in Middle Sino-Korean. There are four tones in *Qieyun*, namely *ping* 平, *shang* 上, *qu* 去 and *ru* 入. A general accepted description on these four tones can be expressed as follows: *ping* tone is a level tone, *shang* tone a rising tone, *qu* tone a falling tone, and *ru* tone an abrupt tone (Pan and Zhang 2013). There are three major changes in tones from Middle Chinese to Old Mandarin. First, the *ping* tone was split into the *yin* 陰 register (high register) when the initial is voiceless, and the *yang* 陽 register (low register) when the initial is voiced. Second, the *shang* tone in voiced initial syllables changed to the *qu* tone. Third, the *-p*, *-t*, *-k* coda in the *ru* tone syllables disappeared, and the *ru* tone merged into *ping*, *shang* and *qu* tones.

5.1 The tones in *HMJH* (*Yesan Mungo* edition)

In *HMJH* Choe states, "the pitch of sound is indicated through the number of dots at the side of characters. There is no dot for *ping* tone, two dots for *shang* tone, and one dot for *qu* tone or *ru* tone."³⁶⁸ For the convenience of transcription, this study uses L to refer to the *ping* tone, R for the *shang* tone and H for the *shang/ru* tone. Below is an example of our transcription of the tones in *HMJH*.

(1)

Tone	Character	Representation in <i>HMJH</i>	Transcription	Phonetic description
<i>ping</i>	天	no dot	L	level

³⁶⁸ 凡字音高低皆以字傍點之有無多少為準，平聲無點，上聲二點，去聲入聲皆一點。

<i>shang</i>	字	two dots	R	rising
<i>qu</i>	地	one dot	H	high
<i>ru</i>	節	one dot	H	high

The following chart lists the representation of MC tones in *HMJH* (YS edition). It is noteworthy that for some characters, such as 關[koan], 盞[ko], 贖[huai], two tonal notations can be found. In such cases only the first tonal notation was counted in when we made this chart.

(2)

Tone in MC	Representation in <i>HMJH</i>	Number of token	Total Number of token	Percentage
<i>ping</i>	L	1413	1473	95.93%
	R	36		2.44%
	H	24		1.63%
<i>shang</i>	L	26	606	4.29%
	R	472		77.89%
	H	108		17.82%
<i>qu</i>	L	50	679	7.36%
	R	506		74.52%
	H	123		18.11%
<i>ru</i>	L	34	602	5.65%
	R	13		2.16%
	H	555		92.19%

First, MC *ping* (level) tone is generally represented as the level tone (no dot) in *HMJH*. Second, MC *shang* (rising) tone is generally represented as the rising tone (two dots) in *HMJH*. Third, MC *qu* (falling) tone is generally represented as the rising tone (two dots)

in *HMJH*. Fourth, MC *ru* (abrupt) tone is generally represented as the high tone (one dot) in *HMJH*.

(3)

Representation in <i>HMJH</i>	MC Tone	Number of token	Total Number of token	Percentage
L (no dot)	<i>ping</i>	1413	1523	92.78%
	<i>shang</i>	26		1.71%
	<i>qu</i>	50		3.28%
	<i>ru</i>	34		2.23%
H (one dot)	<i>ping</i>	24	810	2.96%
	<i>shang</i>	108		13.33%
	<i>qu</i>	123		15.19%
	<i>ru</i>	555		68.52%
R (two dots)	<i>ping</i>	36	1027	3.51%
	<i>shang</i>	472		45.96%
	<i>qu</i>	506		49.27%
	<i>ru</i>	13		1.27%

The above chart shows the following features: first, the L tone in *HMJH* is mainly from MC *ping* tone (92.78%). Second, the H tone (one dot) in *HMJH* is mainly from MC *ru* tone (68.52%) and *qu* tone (15.19%). This is consistent with Choe's claim of representing MC *ru* and *qu* tones as H (one dot). Third, the R tone (two dots) in *HMJH* is mainly from *qu* tone (49.27%) and *shang* tone (45.96%). This shows that the representation of the MC *shang* tone and *qu* tones have no difference in *HMJH*. This is consistent with the record in other documents. In the preface of *DGJU* it says "the *shang* tone and *qu* tone have no difference in characters' reading 字音則上去無別." In *SH*, it says, "the *shang* and *qu* tone

merged together in colloquial reading in recent time 近世時俗之音上去相混." All of these records point to the same phenomenon, namely, no distinction between the *shang* tone and the *qu* tone in the 15th-16th century Korean. Given the fact that Choe represents MC *ru* tone and *qu* tone as the same H (one dot), the MC *shang*, *qu* and *ru* tones are in fact represented as the same type in Korean in Choe's time. To sum up, the tone system of SK in Choe's time can be categorized into two types, namely level tone and oblique tone.

5.2 The tonal notation in other editions of *HMJH*

The tonal notation in different editions of *HMJH* is not always consistent. The following chart lists the different tonal notations between the YS edition and the *DD* edition.

(4)

	YS edition	<i>DD</i> edition	MC
夏 ³⁶⁹	ping (L)	shang (R)	qu
晷	qu/ru (H)	shang (R)	shang
檀	shang (R)	ping (L)	ping
寤	qu/ru (H)	shang (R)	qu
磻	qu/ru (H)	shang (R)	shang
埃	shang (R)	qu/ru (H)	ru
𪔐	ping (L)	qu/ru (H)	ru
袂	ping (L)	qu/ru (H)	ru
縷	ping (L)	shang (R)	shang
髭	ping (L)	shang (R)	qu

³⁶⁹ In *Jiyun* the *fanqie* spelling of *xia* 夏 is *haijia* 亥駕 when the meaning is "summer", and *haiya* 亥雅 when the meaning is "China". In *HMJH* the meaning of *xia* 夏 is "summer".

布	qu/ru (H)	shang (R)	qu
疥	ping (L)	shang (R)	qu
蛊	qu/ru (H) (cadelle) shang (R) (parasite)	shang (R)	shang/qu
鎬	qu/ru (H)	shang (R)	shang
卸	qu/ru (H)	shang (R)	qu
度	ping (L)	shang (R)	qu
畜	ping (L)	shang (R)	qu
贖	qu/ru (H) [huəi] shang (R) [koi]	shang (R) [huəi]	qu
勸	ping (L)	shang (R)	qu
七	shang (R)	qu/ru (H)	ru
內	qu/ru (H)	shang (R)	qu
焚	qu/ru (H)	ping (L)	ping
終	shang (R)	ping (L)	ping

In most cases, the new notation in *DD* edition is correct. However, in the cases of the following characters 寤布卸贖內, the new notation is wrong, but the notation in *YS* edition is correct. Neither *DD* nor *YS* edition is correct in the notation for 夏髻疥度畜勸.

5.3 The reason of wrong tonal notation in *HMJH*

It is hard to explain why the tonal notation is wrong for each case in *HMJH*, however, the analogy based on phonetic component surely plays an important role. Below are some examples.

(5)

	MC tone	<i>HMJH</i>	Analogy source
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批	ping	shang	比
淹	ping	shang	奄
噪	ping	shang	澡
髑	ping	shang	稿, 搞, 稿
腿	ping	shang	腿
瀾	ping	shang	爾

The tonal notation in some characters may be a reflection of the tonal value in Old Mandarin. For example, *zan* 咱 has two readings in *HMJH*, namely L tone [tsa] and R tone [tsam]. The R tone may be derived from the reading of *zan* 咱 in Old Mandarin, which is a rising *yangping* 陽平 tone. In addition, it is noteworthy that some time different tones may be assigned to distinguish meaning. For example, the annotation for *guan* 關 is *HMJH* is "crossroad [koan] (one dot); to close, to shut [koan] (no dot)". However, the pronunciations for these two meanings have no difference in Chinese. Only one *fanqie* for *guan* 關 can be found in *Guangyun*, *Jiyun* and *Zhongyuan yinyun*.

5.4 The tonal representation in other sources

Different from *HMJH*, which proposes to categorize the MC four tones into three types, *CJM* and *YH* keep the distinction of the four tones clearly. In these two books there is no dot for *ping* tone and *ru* tone, and a dot to the left of the character for *shang* tone, and a dot to the right for *qu* tone. And the *ru* tone can be distinguished from the *ping* tone by the *-p*, *-l*, *-k* coda. According to Synn (2006:135-136), the correctness in representing MC tones in *YH* is 99.4% for *ping* tone, 92.9% for *shang* tone, 94.4% for *qu* tone and

99.7% for *ru* tone. The mix between *shang* tone and *qu* tone accounts for 54.1% of all mismatched cases.

One can notice that there is inconsistency in the tonal notations among different *Eonhae* works. For example, 稼 [ka] is notated with an R tone in *MJ*, but H tone in *NE*. And the tonal representation can be different even in the same book. For example, in *MJ* the tonal notation for 駕 [ka] is the R tone in chapter 4 verse 7, but the L tone in chapter 2 verse 40 (Kwon Inhan 2005).

In rhyme books, such as *HD*, *SU* and *GJ*, all characters are placed according to the four tones in MC. Therefore, no tonal notation is needed to specify the tones for each character in these books. According to Lee Ki-Moon (1963:142) tonal notation starts to become inconsistent among different documents since Middle 16th century, and it finally disappeared in all documents since 17th century.

Chapter 6 An Investigation on the Origin of Sino-Korean

This chapter will discuss the origin of SK by comparing the mainstream representation in Middle SK and the sound systems in different works of Chinese, including *Qieyun* (601), *XYYY* (c. 650), *JSYY* (747), *HLYY* (810), *SYCHT* (c. 1050) and *QYZZT* (c. 12th century).

6.1 Initial

As states in Chapter 3, the following features in the Middle SK initial system can provide us a clue about the origin of Modern SK. First, the labial-dental *fei* 非 series has no distinction with the bilabial *bang* 幫 series. Second, the *yun* 云 initial is separated from the *xia* 匣 initial. Third, the *zhi* 知 series has not become affricative or fricative. Fourth, the *chan* 禪 initial and the *chuan* 船 initial belong to the same category. Fifth, the *ri* 日 initial has lost its nasality.

6.1.1 The *bang* 幫 initial group and the *fei* 非 initial group

No distinction is made between the *bang* 幫 (bilabial) initial group and the *fei* 非 (labial-dental) initial group in MiSK (幫非>[p]/[p^h], 滂敷>[p^h]/[p], 並奉>[p]/[p^h] and 明微>[m]). It should be noted that this feature is not a result of adjustment in the process of adaptation. Because if there was *fei* 非 [f] initial in the source input, the [f] initial would had been represented systematically as one type, either [p^h] or [h]. Therefore, no

distinction between the *bang* series and the *fei* series in MiSK indicates that there was no *fei* 非 series in the source language.

Qieyun (601) has only one series of labial initials: [p, p^h, b, m]. This is evident in the fact that the *fanqie* of *Qieyun* do not distinguish the *fei* initial group from the *bang* initial group, such as 篇(芳連). In the *fanqie* of *XYYY* (c. 650), bilabial and labial-dental initials were used without distinction, such as 諷(不鳳), 佻(父美), 匾(方殄), 蜂(匹凶), 孚(匹于), 潘(敷袁), 泛(匹劍), 敷劍, 孚梵, 髡(扶忍), 邨(扶必), 聲(亡交, 亡包), 憮(莫禹), 牧(莫祿, 亡福), 睦(莫祿, 亡竹), 昴(亡飽), 眇(亡紹), 俛(無辯), 蜜(亡一), 湏(亡善) (Wang Li 1982:125). This fact implies that the *fei* series had not occurred in *XYYY*.

In *JSYY* (747), according to Shao Rongfen (1981:105), the mix in the *fanqie* between the *bang* series and the *fei* series accounts for 16.91%. And some characters have both *bang* series initial character and *fei* series initial character as initial speller, such as 裨(頻卑, 苻支). These facts show that the *fei* series had not occurred in *JSYY* (747).³⁷⁰

In *HLYY* (810), the *fei* 非 initial group had already occurred because the result of *xilian* 系聯³⁷¹ shows that the initial spellers for the *fei* 非 initial link up with the initial spellers for the *fu* 敷 initial (Huang 1931:31).

³⁷⁰ Shi Xiangdong (1983:31) states that "the bilabial initials and labial-dental initials in Sanskrit, which were not distinguished in those old transliterations, were distinguished by Xuanzang 玄奘 (602-664AD)." Xuanzang was born in Goushi 纁氏, a place near Luoyang, and lived there until his teenager. Therefore, his transliteration should be based on the sound system of the Luoyang dialect. Xuanzang's transliteration shows that *fei* 非 series has started to occur in Luoyang in the 7th century. However, according to *JSYY*, there is no *fei* series in the Luoyang dialect in the 8th century. The inconsistency between *Xiyuji* and *JSYY* may be explained by hypothesizing that Xuanzang used the colloquial reading while He Chao used the literary reading.

³⁷¹ *Xilian* 系聯 is a technique, first proposed by Chen Li 陳澧 (1810-1882), to categorize the upper characters of *fanqie* and the lower characters of *fanqie*. All characters that share the same upper characters of *fanqie*, plus these upper characters constituent one initial group, and all

In *SYCHT* (c.1050), labial-dental initial characters are listed as one individual series. The *fei* series is also listed as an individual group in the Song Dynasty rhyme tables, such as *SSDZ* and *QYZZT*.

6.1.2 The *yun* 云 initial

The *yun* 云 initial, also called the *yu* 于 or *yu* 羽 initial, is represented as the zero-initial in *MiSK*. In *Yuanben yupian* 原本玉篇 and *Jingdian shiwen* 經典釋文, the *xia* 匣 initial and the *yun* 云 initial belong to the same category (Zhou Zumo 1966:296, Wang Li 1982:154). The *yun* 云 initial only appears before the third division and it is in a complementary distribution with the *xia* 匣 initial in *Guangyun*. Dong Tonghe (1996:153-154) states that "due to the influence of the [j] medial in the third division, the *yun* initial is in fact a palatalized *xia*. This difference makes the rhyme books treat the *xia* initial and the *yun* initial as two categories."

There were no distinction between the *yun* initial and the *xia* initial in *XYYY*, since they can be used as initial spellers for each other, such as 擗(于桂), 瘡(胡軌), 佑(胡救), 闕(胡域), and 熊(胡弓, 胡宮).

In *JSYY*, the *yun* initial and the *xia* initial have two different types of initial spellers, implying that the *yun* initial should be independent from the *xia* initial.

According to Huang Cuibo (1931:25-26), the *yun* initial and the *xia* initial are distinguished in *HLYY*. The application of the *xilian* technique shows that the *xia* initial

characters that share the same lower characters of *fanqie*, plus these lower characters constitute one rhyme group. By applying this technique, we can identify the number of initials and finals.

characters 胡庖弘脛豪毫皓號何賀鶴航話會憤回 and the *yun* initial characters 違葦偉爰越為于宇禹運雲隕暈尤右榮 turn out to be two different groups.

In *SYCHT*, *wang* 王, a *yun* initial character, and *yin* 寅, an *yi* 以 initial character, are listed in the same column, indicating that the readings of the *yun* initial and the *yi* 以 initial are identical. This is consistent with the arrangement in the Song Dynasty rhyme tables, such as *SSDZ* and *QYZZT*, in which the *yun* initial and the *yi* initial are listed under the same initial named *yu* 喻.

6.1.3 The *zhi* 知 initial group

The *zhi* 知 initial, *che* 澈 initial and *deng* 澄 initials are represented as [t] or [tʰ] in MiSK. According to Lee Dukchun (1985), this is a reflection of Old Chinese, in which there was no *sheshang* (retroflex stop) initials. However, the *zhi* initial was still a stop sound in the *Qieyun* system([t] in Karlgren, Wang Li, Dong Tonghe, Li Rong, Shao Rongfen and Zhengzhang Shangfang's reconstruction, [t] in Zhou Fagao, Pulleyblank and Pan Wuyun's reconstruction). Therefore, the *zhi* initial in *Qieyun*, regardless of being a palatal or retroflex, should also have been adapted as [t] in Korean. In other words, no distinction between *shetou* and *sheshang* in SK is expected as long as the affricativation of the *zhi* series has not occurred.

In *XXXX* the *duan* 端 initial characters and the *zhi* 知 initial characters can be used as initial spellers for each other, suggesting that the *zhi* 知 initial had not become affricative yet. Below are some examples cited from Wang Li (1982:124): 湏(都洞, 都用, 竹用), 戇(讀絳, 竹巷), 斲(都角), 啄(丁角), 摘(都革), 討(恥老), 薑(他邁, 敕芥, 丑芥),

惕(聽歷, 敕歷), 洩(敕計), 撞(徒江), 茶(徒加, 徒迦), 瞪(徒萌), 懟(徒淚), 袒(徒覓), 擢(徒角, 徒卓), 濯(徒角), 喃(女函), 襪(女履), and 赧(奴盞, 女盞).

According to Shao (1981:106), in *JSYY* there is some mix in the *fanqie* for *duan* 端 and *zhi* 知 (10.31%), *ni* 泥 and *niang* 娘 (12.17%), but no mix between *tou* 透 and *che* 徹 or between *ding* 定 and *deng* 澄.

In *HLYY*, the *zhi* 知, *che* 徹 and *deng* 澄 initials are still independent and have not changed into affricative, while the *niang* 娘 initial has merged into *ni* 泥. Characters with the *ni* 泥 or *niang* 娘 initials can be linked through *xilian* (Huang 1931:26).

The evidence of affricativation of the *zhi* 知, *che* 徹 and *deng* 澄 initials can be found from the Song Dynasty materials. In *SYCHT*, the *zhi* 知 series is listed after the *zhao* 照 series, which are affricates and fricatives, implying that in Shao Yong's time the *zhi* 知 series had become affricates (Zhou Zumo 1966:198). In Zhu Xi's 朱熹 (1130-1200) *fanqie* the *zhi* 知 series has mixed with the *zhao* 照 series (Wang Li 1985). In *QYZZT* there are many traces indicating that the *zhi* series has merged into the *zhang* 章 series (Li Xinkui 2000:78). For example, *zhao* 肇, which is a *deng* 澄 initial character, is placed under the initial of *chuang* 牀 in *QYZZT*.

6.1.4 The *chan* 禪 initial and the *chuan* 船 initial

Both the *chan* 禪 initial and the *chuan* 船 initial are generally represented as [s] in Middle Sino-Korean, as exemplified below.

(1)

	Character	Rhyme group	Rhyme	Labial Roundness	Division	Tone	<i>HMJH</i>
船	蛇	假	麻	unrounded	3	<i>ping</i>	sia
	舌	山	薛	unrounded	3	<i>ru</i>	siəl
	船	山	仙	rounded	3	<i>ping</i>	siən
禪	時	止	之	unrounded	3	<i>ping</i>	si
	辰	臻	真	unrounded	3	<i>ping</i>	sin
	塾	通	沃	rounded	3	<i>ru</i>	siuk

According to Pan and Zhang (2013), the reconstructed phonetic values for the *chan* 禪 and *chuan* 船 initial are [dz] and [z] respectively in the *Qieyun* system. If the *chan* 禪 initial in the source language were [dz], then it should have been represented in the same way as the *cong* 從 [dz] initial, which is represented as [ts] or [ts^h] in MiSK. The table below lists the reading of some *cong* 從 initial characters in *HMJH*.

(2)

Character	Rhyme group	Rhyme	Labial Roundness	Division	Tone	<i>HMJH</i>
坐	果	戈	rounded	1	<i>shang</i>	tsoa
疾	臻	質	unrounded	3	<i>ru</i>	tsil
匠	宕	陽	unrounded	3	<i>qu</i>	tsiaŋ
瘡	梗	昔	unrounded	3	<i>ru</i>	ts ^h iək
晴	梗	清	unrounded	3	<i>ping</i>	ts ^h iəŋ
叢	通	東	rounded	1	<i>ping</i>	ts ^h oŋ

The representation of the *chan* 禪 initial and the *chuan* 船 initial in MiSK implies that these two initials merged in the source language that Korean borrowed from. In *Yanshi jiaxun* 顏氏家訓 [The family instructions of master Yan] one is told that southerners pronounced *shi* 石 as *she* 射, and *shi* 是 as *shi* 舐. This shows that in southern Chinese *chan* 禪 and *chuan* 船 had merged at that time. According to Pan (1992: 46), the *chan* 禪 initial and the *chuan* 船 initial are distinguished in rhyme books compiled by scholars in the north, such as Cao Xian's 曹憲 (c.541-c.645) *Boya yin* 博雅音, Yan Shigu's 顏師古 (581-645) *Hanshu zhu* 漢書註 and Li Shan's 李善 (630-689) *Wenxuan zhu* 文選註. *Qieyun* follows northern Chinese usage and makes a clear distinction between these two initials. In *XYYY* (650), these two initials employ two different types of upper characters in *fanqie*. According to Zhou Fagao (1948:395), the representation of the *chan* initial and the *chuan* initial in *XYYY* is generally consistent with *Guangyun*. In *JSYY* (747), the *chan* initial and the *chuan* initial are distinguished in *fanqie* except in the case of *zhe* 褶. This, according to Shao Rongfen (1981:108), is because *zhe* 褶 had multiple readings.

In *HLYY* (810) the *chan* initial and *chuan* initial are not distinguished, since the initial spellers for these two initials can be linked through *xilian* (Huang 1931:26). In *SYCHT* (c.1050) the *chan* initial character *chen* 辰 and the *chuan* initial character *chong* 崇 are listed in the same column, suggesting that these two initials are identical at that time. Although *chan* 禪 and *chuan* 船 are listed as two different initials in *QYZZT*, the merger of these two initials can be found in the fact that many *chan* initial characters are placed under the *chuan* initial and many *chuan* initial characters are placed under the *chan* initial (Li Xikui 2000:84-85).

6.1.5 The *ri* 日 initial

The reconstructed phonetic value of the *ri* 日 initial is [z] in *HMJH*. This is a reason for thinking that the nasality of the *ri* initial must disappeared in the source input, since otherwise SK would probably had represented the *ri* initial as [n]. The *ri* initial is a nasal sound [ŋ] in *Qieyun* (Pulleyblank 1962, Dong 1996, Pan and Zhang 2013). The *fanqie* of *XYYY*, *JSYY* and *HLYY* show that the *ri* initial is one independent initial in these three works, however, it tells us nothing about the phonetic value of the *ri* initial. One often finds the *ri* initial only used to transcribe the palatal nasal in Sanskrit in Early Tang. According to Shi Xiangdong (1983:30), Xuanzang 玄奘 (602-664) used the *ri* initial characters 若攘爾 to reflect Sanskrit ñ [ŋ]. Liu Guanghe (1984) states that Bukong 不空 (705-774) generally used the *ri* initial to transcribe [z], and occasionally [ŋ]. This fact shows that the *ri* initial at Bukong's time was already a fricative. In Sino-Japanese the *ri* initial is represented as a nasal sound [n] in Go-on, while as voiced fricative [z] in Kan-on. In the system of 36 initials, which appeared in the Song period, the *ri* initial is labeled as *banchi* 半齒 (half dental). In *SYCHT* the *ri* initial is placed in the same list with the *shen* 審 and *chan* 禪 initials, implying that the *ri* initial had lost its nasality at that time.

6.2 Rhyme

As noted in Chapter 4, the following features in Middle SK rhyme system can provide us a clue about the origin of Modern SK. First, *chongyun* (double rhymes) are distinguished in some pairs of rhymes. Second, fourth division rhymes have -j glide. Third, the reading of the *zhi* 止 rhyme group is [ʌ] when the initial is from the *jing* 精

series or the *zhuang* 莊 series. Fourth, the distinction of Middle Chinese *-p*, *-t*, and *-k* codas are preserved.

6.2.1 *Chongyun* 重韻 (double rhymes)

Chongyun 重韻 (double rhymes) means two or three rhymes have the same division and openness in one rhyme group. Traditionally this concept is used only to refer to these double rhymes in the first and second division; however, it is also used to include the third division double rhymes in recent studies. In this study the concept of *chongyun* is used in its broad sense. Below is a summary of these double rhymes.

(3)

	Rhyme group	<i>Ping</i> tone	<i>Shang</i> tone	<i>Qu</i> tone	<i>Ru</i> tone
1 st division	蟹	哈	海	代	
				泰	
		灰	賄	對	
				泰	
	咸	覃	感	勘	合
		談	敢	闕	盍
	通	東	董	送	屋
		冬		宋	沃
2 nd division	蟹	皆	駭	怪	
		佳	蟹	卦	
				夬	
	咸	咸	賺	陷	洽

		銜	欄	鑑	狎
	山	山		禡	黠
		刪	潛	諫	鎋
	梗	庚	梗	映	陌
		耕	耿	諍	麥
3 rd division	遇	魚	語	御	
		虞	麌	遇	
	蟹			祭	
				廢	
	止	支	紙	寘	
		脂	旨	至	
		之	止	志	
		微	尾	未	
	流	尤	有	宥	
		幽	黝	幼	
	咸	鹽	琰	豔	葉
		嚴	儼	釅	業
	山	仙	獮	線	薛
		元	阮	願	月
	臻	真(臻)	軫	震	質
		殷	隱	焮	迄
		諄	準	稕	術
		文	吻	問	物
	梗	庚	梗	映	陌
		清	靜	勁	昔
	通	東		送	屋
		鍾	腫	用	燭

Most of these double rhymes are represented as the same type in MiSK. This may result from the following potential reasons. First, the source language that SK borrowed from has no difference in these rhymes. Second, the different source forms in Chinese were adapted into the same form in Korean due to the phonotactic mismatch between Chinese and Korean. Third, two different forms in SK merged into one type due to sound change. Therefore, those rhymes that are represented as the same one cannot provide reliable information about the borrowing time. In this study we will focus on the following pairs of double rhymes, which are represented differently in MiSK.

(4)

	Rhyme group	Double Rhymes	MiSK
1 st division	<i>xie</i> 蟹	<i>hai</i> 哈 vs <i>tai</i> 泰	[ɬi] vs [ai]
3 rd division	<i>mu</i> 模	<i>yu</i> 魚 vs <i>yu</i> 虞	[iə]/[ə]/[o] vs [iu]/[u]
	<i>zhen</i> 臻	<i>zhen</i> 真 vs <i>yin</i> 殷	[in] vs [in]
	<i>zhen</i> 臻	<i>zhi</i> 質 vs <i>qi</i> 迄	[il] vs [il]/[əl]
	<i>tong</i> 通	<i>dong</i> 東 vs <i>zhong</i> 鍾	[iuŋ] vs [ioŋ]
	<i>tong</i> 通	<i>wu</i> 屋 vs <i>zhu</i> 燭	[iuk] vs [iok]

6.2.1.1 *Hai* 哈 rhyme and *tai* 泰 rhyme (*kaikou*)

The *hai* 哈 rhyme is distinguished from the *tai* 泰 rhyme (*kaikou*) in *Qieyun*. In *XYYY* the *dai* 代 rhyme characters 載代礙戴溉賚愛嘅再賽 and the *tai* 泰 rhyme characters 艾蓋貝害勾賴害昧沛昧 have different lower characters in *fanqie*. In *JSYY*, the *dai* 代 rhyme characters and the *tai* 泰 rhyme characters can be used to spell each other, such as

艾(五愛)³⁷², 埭(達賴), and 慨(苦蓋). Moreover, the *tai* 泰 rhyme character *lai* 賴 and the *dai* 代 rhyme character *lai* 徠 are homophones (Shao 1981:111). In *HLYY* these two rhymes are identical because the *fanqie* of the following characters 艾蓋太汰害大逮載戴 代怠愛礙耐岱賚帶 can be linked through *xilian*. In *SYCHT*, the *hai* 哈 rhyme and the *tai* 泰 rhyme belong to the same category, which is reconstructed as [ai] in Zhou Zumo (1966:645). The merging of these two rhymes is also manifested in the Song Dynasty rhyme tables. For example, in *SSDZ* the *dai* 代 rhyme characters 慨代耐載菜賽愛 and the *tai* 泰 rhyme characters 蓋艾帶泰害 are placed in the same line. In *QYZZT* one can find the *hai* 哈 rhyme characters 載菜賽在 and the *tai* 泰 rhyme characters 蓋礩艾帶泰 大奈賴害藹餃 in the same line.

6.2.1.2 Yu 魚 rhyme and yu 虞 rhyme

In *Qieyun* *yu* 魚 and *yu* 虞 are two different rhymes. However, according to the preface of *Qieyun*, the distinction of *yu* 魚 and *yu* 虞 is lost in most northern Chinese dialects at that time. In *Yanshi jiaxun* 顏氏家訓, Yan Zhitui 顏之推 (531-591) states that "northern people pronounce *shu* 庶 as *shu* 戌, and *ru* 如 as *ru* 儒" and "many northern people pronounce *ju* 舉莒 as *ju* 矩." The application of the *xilian* technique shows that *yu* 魚 and *yu* 虞 are two different rhymes in *XYYY* (Zhou 1948:405). In *JSYY* (747), the *yu* 魚 rhyme and the *yu* 虞 rhyme had merged into one type, since the following characters 區俱嶇俱衢肋胸于諏魚盱如茹渠疏菹餘余徐睢俞鬚渝闕朱窳殊銖 can be linked up

³⁷² The *fanqie* spelling is placed in the parentheses.

through *xilian* (Shao Rongfen 1981:115). In *HLYY*, these two rhymes are well distinguished. According to Huang Cuibo (1931:35), the *yu* 魚 rhyme characters 居魚間 驢豬間除蹠猪於疏初菹 and the *yu* 虞 rhyme characters 雛瑜于虞葛愉俱拘愚隅隅衢驅 駒區娛廚孟逾朱與榆瑜珠須愉殊須俞逾侏儒殊銖 use two different types of lower characters in *fanqie*. In *SYCHT* the *yu* 魚 rhyme characters 魚鼠去 are used to represent both the *yu* 魚 and *yu* 虞 rhymes, suggesting that these two rhymes had merged into one type. In *QYZZT* the *yu* 魚 rhyme characters 魚豬居渠書諸除攄於虛如蜍臚 and the *yu* 虞 rhyme characters 厨無晷夫汙于羆 are listed in the same line, indicating that these two rhymes were identical at that time.

6.2.1.3 *Zhen* 真 rhyme and *yin* 殷 rhyme

Qieyun makes a clear distinction of the *zhen* 真 rhyme and the *yin* 殷 rhyme. In *XYYY*, the *zhen* rhyme and the *yin* rhyme are distinguished in *fanqie* except in the following two cases: 斤(居銀), 筋(居銀, 居欣). Based on these two examples, Wang Li (1982) claims that the *zhen* 真 rhyme and the *yin* 殷 rhyme have merged together in *XYYY*. However, Zhou Fagao (1948) viewed these two rhymes as two independent rhymes. Zhou states that in the annotation for *jin* 斤 there are two *fanqie* spellings, *juqin* 居勤 and *juyin* 居銀. According to the convention in *XYYY*, giving two *fanqie* spellings for one character implies there is some difference between them. Zhou argues that it is possible that besides the *yin* 殷 rhyme reading, *jin* 斤 and *jin* 筋 also have the *zhen* 真 rhyme reading.

In *JSYY* these two rhymes had not merged into one type (Shao 1981:116). Shao states that although there are two *fanqie* spellings for *yin* 鄞 (語斤, 牛巾), this is

consistent with *Guangyun*, in which *yin* 鄞 has both the *zhen* 真 rhyme and the *yin* 殷 rhyme readings.

In *HLYY* the *zhen* rhyme characters 詵臻巾銀 and the *yin* rhyme characters 斤筋殷 欣齷 can be linked up through *xilian* (Huang 1931:38). In *SYCHT* the *zhen* rhyme, the *yin* rhyme and the *hen* 痕 rhyme are merged. The *zhen* 真 rhyme character *chen* 臣, the *zhen* 軫 rhyme character *yin* 引 and the *hen* 恨 rhyme character *gen* 艮 are used as the representative characters for the *kaikou zhen* 臻 rhyme group. In *QYZZT* the *zhen* 真 rhyme characters 人鄰臣申神真瞋陳紉珍巾 and the *yin* 殷 rhyme characters 殷勤欣 are listed in the same line, indicating that these two rhymes had merged into one type.

6.2.1.4 *Zhi* 質 rhyme and *qi* 迄 rhyme

In *Qieyun* *zhi* 質 and *qi* 迄 are two different rhymes. In *XYYY* the *zhi* rhyme and the *qi* rhyme are distinguished in *fanqie* (Zhou 1948:431-433). In *JSYY* the character *xi* 肸 has two *fanqie* spellings, namely *xuyi* 許乙 and *xuqi* 許迄. *Yi* 乙 is a *zhi* 質 rhyme character, and *qi* 迄 is a *qi* 迄 rhyme character. This suggests that the *zhi* rhyme and the *qi* rhyme are different in *JSYY* (Shao 1981:116). In *HLYY*, *qi* 迄 rhyme characters never occur in *fanqie*. However, given the fact that the *zhen* 真 rhyme and the *yin* 殷 rhyme have merged in *HLYY*, the *zhi* 質 rhyme and the *qi* 迄 rhyme should also have become the same type. In *SYCHT*, the *zhi* rhyme character *ri* 日 is used to represent both the *zhi* 質 and *qi* 迄 rhymes, suggesting that these two rhymes are identical. In *QYZZT*, these two

rhymes belong to the same category because the *zhi* 質 rhyme characters 室質秩叱失乙實日栗 and the *qi* 迄 rhyme characters 訖乞疙 are listed in the same line.

6.2.1.5 *Dong* 東 rhyme (div.3) and *zhong* 鍾 rhyme

Qieyun distinguishes the *dong* 東 rhyme (div.3) and the *zhong* 鍾 rhyme. The application of the *xilian* technique shows that in *XYYY* the *dong* 東 rhyme (div.3) characters 雄宮弓戎終蠡終隆冲中蟲 and the *zhong* 鍾 rhyme characters 鍾容恭兕顒匈喁龍逢封 turn out to be two different groups (Zhou 1948:443). In *JSYY* the third division *dong* 東 rhyme and the *zhong* 鍾 rhyme have two different types of lower characters in *fanqie* (Shao 1981:121). In *HLYY*, the *dong* 東 (div.3) rhyme and the *zhong* 鍾 rhyme are two separate rhymes. The *dong* 東 (div.3) rhyme characters 弓穹隆冲中衷融嵩終蠡戎 and the *zhong* 鍾 rhyme characters 恭邕癰凶顒鍾春庸從从容鎔 are distinguished in *fanqie* (Huang 1931:40). In *SYCHT*, the *zhong* 鍾 rhyme character *long* 龍, *yong* 甬 and *yong* 用 are used to represent both the *dong* 東 (div.3) and *zhong* 鍾 rhymes. In *SSDZ*, the third division *dong* 東 rhyme characters 窮穹中忡蟲雄 are placed in the same line with the *zhong* 鍾 rhyme characters 恭鍾衝春邕胸龍茸. In the no.2 chart of *QYZZT*, the third division *dong* 東 rhyme characters 弓穹窮中忡蟲風 are placed in the same line as the *zhong* 鍾 rhyme characters 顒濃春容.

6.2.1.6 *Wu* 屋 rhyme (div.3) and *zhu* 燭 rhyme

The *wu* 屋 rhyme (div.3) and the *zhu* 燭 rhyme are two different rhymes in *Qieyun*. In *XYYY* the *wu* 屋 rhyme (div.3) and the *zhu* 燭 rhyme use different types of lower characters in *fanqie*. The lower characters of *fanqie* for the *wu* 屋 rhyme (div.3) include 祝育煜掬鞠六逐築福 and that for the *zhu* 燭 rhyme include 足欲屬蜀褥玉勛錄躅 (Zhou 1948:443). A distinction between the *wu* 屋 (div.3) rhyme and the *zhu* 燭 rhyme remains in *JSYY* (Shao 1981:121). In *HLYY* the *wu* 屋 (div.3) rhyme characters 縮六戮陸竹築肉鞠鞠掬菊郁昱育宿 and the *zhu* 燭 rhyme characters 局玉獄鍋鬪綠燭蓐辱欲鵠屬 can be linked into two different groups through *xilian* (Huang 1931). In *SYCHT*, the *zhu* 燭 rhyme character *yu* 玉 is listed as the corresponding *hekou* character for the *wu* 屋 (div.3) rhyme character *liu* 六, implying that the *wu* 屋 (div.3) rhyme and the *zhu* 燭 rhyme belong to the same category. In *SSDZ*, the *wu* 屋 (div.3) rhyme characters 菊福伏郁 and the *zhu* 燭 rhyme characters 曲玉褥旭束 are placed in the same line. In the no.3 chart of *QYZZT* one can find the *wu* 屋 (div.3) rhyme characters 竹菊叔粥伏福目六逐郁熟 and the *zhu* 燭 rhyme characters 玉辱旭 in the same line.

6.2.2 The -j glide of the fourth division rhymes

There are eight fourth division rhymes in *Qieyun*, namely *qi* 齊, *xiao* 蕭, *tian* 添, *tie* 帖, *xian* 先, *xie* 屑, *qing* 青 and *xi* 錫. The table below lists the representation of these fourth division rhymes in *HMJH*.

(5)

Rhyme	<i>Qieyun</i>	<i>HMJH</i>	Rhyme	<i>Qieyun</i>	<i>HMJH</i>
-------	---------------	-------------	-------	---------------	-------------

齊	ei	iəi	蕭	eu	io
添	em	iəm	帖	ep	iəp
先	en	iən	屑	et	iəl
青	eŋ	iəŋ	錫	ek	iək

The above chart shows that all the fourth division rhymes in *Qieyun* include a [j] glide in MiSK. This fact indicates that in the source language that SK based on, a [j] glide had already occurred in fourth division rhymes. In *Qieyun* there is a [j] glide for the third division, while no [j] glide for the fourth division. In *XYYY* the fourth division rhyme characters and the third division rhyme characters are used to spell each other in some cases (Wang Li 1982: 3-4). For example, the fourth division *ji* 祭 rhyme characters are used to spell the third division *ji* 霽 rhyme characters: 厲(力計), 斃(蒲計). The fourth division *xian* 霰 rhyme characters are used to spell the third division *xian* 線 rhyme characters: 戰(之見), 顫(之見). The fourth division *xiao* 蕭 rhyme characters are used to spell the third division *xiao* 宵 rhyme characters: 瞞(普么). The third division *qing* 清 rhyme characters are used to spell the fourth division *qing* 青 rhyme characters: 垌(共營). The fourth division *tian* 忝 rhyme characters are used to spell the third division *yan* 琰 rhyme characters: 厭(於簞), 廛(於簞).

According to Shao (1981:121), *JSYY* uses different final spellers for the fourth division rhymes and the third division rhymes. In *HLYY* the third and fourth division rhymes use the same series of lower characters in *fanqie*. For example, the fourth division *qi* 齊 rhyme characters 麗隸帝第計繫繼濟細翳噎詣睇戾嚏墜 can be linked up through

xilian with the third division *ji* 祭 rhyme characters 制滯厲例藝惕屬礪曳裔 and the third division *fei* 廢 rhyme characters 刈乂. The merger of the fourth division rhymes and the third division rhymes is clearly manifested in the Song Dynasty documents. For example, in *SYCHT*, *qi* 妻, a *qi* 齊 rhyme character, *zi* 子, a *zhi* 止 rhyme character, and *si* 四, a *zhi* 至 rhyme character, are listed in the same column. In *QYZZT*, the *qi* 齊 rhyme character *di* 低, the *zhi* 支 rhyme character *qi* 祇 and the *zhi* 之 rhyme character *yi* 頤 are placed in the same line.

6.2.3 The [ʌ] reading in the *zhi* 止 rhyme group

The *zhi* 止 rhyme group (*jing* 精 initial group and *zhuang* 莊 initial group) is generally represented as [ʌ] and occasionally as [ii] in *HMJH*. The *zhi* 支 rhyme (*ri* 日 initial) is generally represented as [i] except in the case of 兒 [zʌ].

(6)

		支	脂	之
精	ts	tsʌ 紫髭	tsʌ 姊資姿	tsʌ 子滋孳籽鎡 鼎
清	tsʰ	tsʌ 荊雌		
從	dz	tsʌ 骹疵	tsʌ 自瓷資	tsʌ 字忒慈鷺鷥
心	s	sʌ 璽賜撕鶻 sii 廝	sʌ 死四	sʌ 筍司鴛 蘇絲
邪	z			sʌ 似耜祀飼寺 祠詞
莊	tʂ			sʌ 鍾
崇	dz			sʌ 士事

生	ʂ	sii 筵醺	sΛ 師獅獅	sΛ 史
日	ŋ	zΛ 兒 zi 爾邇		

In *Qieyun* the *fanqie* speller for a *zhi* 止 rhyme group character with the *jing* 精 initial or the *zhuang* 莊 initial can be a *zhi* 止 rhyme group character with other initials. For example, the *fanqie* spelling for the *zhi* 之 rhyme character *zi* 子 is *jili* 即里, showing that *zi* 子 and *li* 里 share the same rhyme. A similar situation can be found in *XYYY* and *JSYY*. For example, in *XYYY* the *fanqie* spelling for *zi* 資 is *ziyi* 子夷 and *zisi* 姊私, indicating that *zi* 資 and *si* 私 share the same rhyme with *yi* 夷. In *JSYY* the annotation for *qi* 齊 says that *qi* 齊 and *zi* 資 share the same rhyme. In *HLYY*, the *jing* 精 initial characters are always used to spell the *zhi* 止 rhyme group characters with the *jing* 精 initial (Kōno 1979). The following examples are cited from Huang (1931).

(7)

	Rhyme	支紙寘	脂旨至	之止志
精	ts	紫(茲此)	資𪛗(子移, 紫斯, 子雌) 咨(姊思) 恣(茲四, 咨肆)	茲(子思), 滋(子私, 子思, 子慈, 子斯) 子梓(茲里, 茲死)
清	tsh	雌(此資) 刺(千利, 此恣, 此漬, 此賜, 雌四)		
從	dz	慈疵(自資, 自茲, 自辭, 疾移) 漬(資賜, 子四)	瓷(自咨)	
心	s	斯厮(息資, 先齋, 徙移)	四泗(思恣)	思(息資) 臬(思子, 思似, 思此) 伺(先吏, 司恣, 司次, 司利, 司寺, 司字)

邪	z			辭(似茲) 似兇(辭紫, 辭姊) 寺飼(辭自, 詞字)
莊	tʂ			緇(滓師, 滓基)
崇	dʒ			滓(緇史)
生	ʂ		師(史緇)	
日	ŋ	爾(而紙)	二餌(如志)	
章	tʂ	支枝(止移) 紙(支爾)	脂(止夷) 旨指(脂齒) 至鷺(之利)	止趾(之爾, 之始, 支市)
昌	tʂʰ			齒(蚩耳, 鴟止)
禪	dʒ	氏是舐(時止, 時爾)		豉時(是之) 市(時止)
書	ʂ	翅(施至, 試異, 試豉, 尸二)	尸屍(始之)	
以	j	移(以之) 以已(夷止)	夷(以之)	

The above chart shows that the final spellers for the *jing* 精 or the *zhuang* 莊 initial group characters are always the *jing* 精 or *zhuang* 莊 initial group characters. But it is necessary to point out there are many exceptions, such as 資𪛗(子移), 子梓(茲里), 刺(千利), 慈疵(疾移), 斯廝(徙移), 伺(先吏, 司利), and 緇(滓基). There are two possible explanations for these exceptions. First, this *fanqie* may be copied from *Qieyun* or other rhyme books. For example, *ci* 疵 has four *fanqie* spellings, one of which is *jiyi* 疾移, which is also seen in *Guangyun*. Second, some characters may have more than one reading. For example, *zi* 𪛗, *si* 廝, *zi* 緇 and *si* 伺 have more than one *fanqie* in *HLYY*, which may be a reflection of different readings. However, it is necessary to say that the two explanations proposed here are no more than a guess and need more evidence to prove it.

Wang Li (1982, 1985) states that in Zhu Ao's 朱翱 *fanqie* for the book *Shuowen jiezi xizhuan* 說文解字系傳 [A collection of *Shuowen jiezi*], a book in the late Tang and Five

Dynasties, the *jing* 精 series initial characters are only used in the *fanqie* spelling for the *jing* 精 series initial characters when the rhymes of these characters belong to the *zhi* 止 rhyme group. This fact shows that in Zhu Ao's 朱翱 *fanqie* the vowel of the *zhi* 止 rhyme group for the *jing* 精 series was different from that of the *zhi* 止 rhyme group for other initials.

In *SYCHT*, *qi* 妻, *zi* 子, *si* 四 and *ri* 日 are placed in the same column, indicating that these four characters should share the same nuclear vowel. Therefore, the nuclear vowel of *zi* 子 should be -i, the same as other three characters. However, Zhou Zumo(1966:602) states that since *zi* 子 is listed in the first division in *SYCHT*, the vowel of *zi* 子 must had changed from [i] to [ɿ]. In the no.18 chart of *QYZZT*, the following characters 兹雌慈思 詞紫此死兕恣載自笥寺 are placed in the first division, indicating that the vowel of the *zhi* 止 rhyme group is not -i when the initial is from the *jing* 精 series. Wang Li (1982) reports that based on the *xieyin* 叶音 information in Zhu Xi's 朱熹 (1130-1200) *Shijing zhuan* 詩集傳 [Collected annotations of *Shijing*], the *zhi* 止 rhyme group (*jing* 精 initial group) generally become [ɿ], and the *zhi* 止 rhyme group (*zhuang* 莊 initial group) generally become [ɿ] although for some characters there are [ɿ] and [i] two readings. However, the *zhi* 止 rhyme group (*zhang* 章 initial group and *zhi* 知 initial group) is still [i].

In *Zhongyuan yinyun* the *zhi* 止 rhyme group characters with initials from the *jing* 精 series, *zhuang* 莊 series, *zhang* 章 series, *ri* 日 or *zhi* 知 series are listed under the so-called *zhisi* 支思 rhyme. There is debate regarding the phonetic value of this *zhisi* 支思

rhyme. Wang Li (1985) proposes that the phonetic value of the *zhisi* 支思 rhyme is [ɿ]/[ʅ] as in Modern Mandarin. Lu Zhiwei (1946) reconstructed the *zhisi* rhyme as [ɿ], claiming that [ɿ] is a sound between [ɿ] [ʅ] and [i] [ə]. Jin Youjing (1998) points out that in *QYZZT* the *de* 德 rhyme characters 則賊塞 are used to represent the corresponding *ru* tone rhymes for the *jing* 精 series *zhi* 止 rhyme group as well as *zhenhen* 臻痕, *youhou* 尤侯 and *zhengdeng* 蒸登 rhymes. Based on this evidence, Jin claims that the phonetic value of the *zhisi* rhyme is [ə]. Wang Hongzhi (2012) divided the development of the *zhisi* rhyme into two stages, claiming that the main vowel has undergone centralization [i]>[u] from late Tang to the Ming Dynasty.

The [ʌ] reading of the *zhi* 止 rhyme group, according to Pak (1971), is a reflection of the [ə] in *ǰǝd(-ǰǝi)/ *-ǰǝd(-ǰǝi) in the stage of Old Chinese, when the coda [d] weakened into vowel [i]. Pak's hypothesis needs to explain why the vowel [ə] in Old Chinese is only preserved for these two initial groups. In addition, if the reading of the *ri* 日 initial character 兒 [zʌ] was borrowed from Old Chinese, then the nasality of the *ri* 日 initial should have been kept in MiSK. Arisaka (1936) proposes that the [ʌ] reading of the *zhi* 止 rhyme group is borrowed from the [ɿ]/[ʅ] in the Kaifeng 開封 dialect in the 10th century. This study agrees to Arisaka's (1936) hypothesis. The development of the *zhisi* rhyme introduced above shows that it only occurs in the *jing* 精 series in late Tang, while it had spread to *zhuang* 莊 series in early Southern Song, and also to *zhang* 章 series and *zhi* 知 series in the Yuan Dynasty. Because in SK the [ʌ] reading of the *zhi* 止 rhyme group is mainly seen in the *jing* 精 and *zhuang* 莊 series, this reading should have been borrowed from the Chinese later than Tang but earlier than the Yuan Dynasty.

6.2.4 -l coda

Among the three stop consonantal codas *-p*, *-t* and *-k* in MC, *-p* and *-k* are well preserved in SK, however, *-t* is borrowed systematically as *-l* in SK. The *-p*, *-t*, and *-k* codas in MC are well kept in *Qieyun*, *XYYY*, *JSYY* and *HLYY*. However, in *SYCHT*, the *-t* and *-k* coda rhymes are placed in same chart as open syllable rhymes, not following the convention to put it after nasal coda rhymes. For example, open syllable rhyme characters *duo* 多, *he* 禾, *dao* 刀 and *mao* 毛 are placed in parallel with *-t* or *-k* coda characters *she* 舌, *ba* 八, *yue* 岳 and *huo* 霍 respectively. This fact shows that the *-t* and *-k* coda at that time had already merged into one type. However, the *-p* coda characters are placed in parallel with the *-m* coda, implying that the *-p* coda was still kept at that time. In *QYZZT*, the *-p*, *-t*, and *-k* coda rhymes are always placed in parallel with open syllable rhymes. In the no.9 chart, characters *de* 德(*-k* coda), *ke* 刻(*-k* coda), *se* 瑟(*-t* coda) and *zhi* 栳(*-t* coda) are placed in the same line, showing that the *-t* coda and *-k* coda at that time had already merged into one type.

Arisaka (1957) hypothesized that the *-l* in SK results from the weakness of *-t > -l* coda in the Song Dynasty. However, it should be noted that the merger of *-p*, *-t* and *-k* has started in the Song Dynasty. If Korean borrowed the *-l* from the Song Dynasty Chinese, then we would probably could not see the systematic correspondence between the *-p*, *-t*, *-k* coda in MC and the *-p*, *-l*, *-k* in SK.

Lee Ki-Moon (1972) and Martin (1997) claimed that the *-l* coda in SK derived from the *-r* in the northwest dialect of Middle Chinese in the late Tang Dynasty. Lee (1972) claimed that it is impossible to explain the appearance of *-l* in SK from the native Korean

phonological point of view. Martin (1997: 263) claimed that "we have no reason to think that Korean ever lacked syllables ending in *-t* so that the syllable structure of Old Korean is not the reason Chinese *-t* was borrowed as *-l*." Lee Ki-Moon (1972) and Martin's (1997) hypothesis is based on the study in Luo Changpei (1933). According to Luo (1933), the *-p*, *-t* and *-k* coda in the northwest dialect of MC underwent a sound change as below.

(8)

Old Chinese(OC)	8 th Century	9-10 th Century	Old Mandarin(OM)
[p]	[b]	[b]	[β]
[t]	[d]	[ɭ]	[r]
[k]	[g]	[g]	[ɣ]

However, this hypothesis is rejected by Pak (1971), Yu (1991), Kang (1997) and Eom (2001). These scholars argue that since no evidence shows any strong relationship between the northwest dialect in the Tang Dynasty and Sino-Korean, it is not natural for Sino-Korean to borrow a sound from a dialect without close relationship. Also there is a lot of evidence showing the [t] coda had been represented as [l] in SK earlier than the late Tang Dynasty. For example, in *Hyeseongga* 彗星歌 "The song of comet" (623 AD) the word 달 [tal] "moon" had already been transcribed with Chinese character *ta* 達, which was a *-t* coda character in MC. Also in the *SGSG* *-t* coda character *hu* 忽 is used to represent the word 골[kol] "village" in the place names in the Three kingdom period of Korean peninsula (57 BC-668 AD).

In this study we will present a piece of evidence to show that the [t] coda in MC has already been represented as [l] in SK in the 8th century. After Buddhism was introduced into the Korean peninsula, many Korean Buddhist monks went to China to study

Buddhist classics. Some monks even made the long Journey to India. One of these monks is Hyecho 慧超 (also written as 惠超), who was from the kingdom Silla 新羅 in the Korean peninsula. Though there is no evidence showing the exact dates regarding his birth, according to Zhang Yi 張毅 (1994), Hyecho 慧超 was born in 700 AD or 704 AD. In the eleventh year of the *kaiyuan* 開元 (723 AD) reign he went to India by sea. He then moved on to visit Kusinagar and Varanasi, and then continued north, where he visited Lumbini (present-day Nepal) and Kashmir. He left India following the Silk Road, via Agni or Karashahr, and got back to China in 727 AD. Several years after his tour of India, he studied in the Esoteric school under Vajrabodhi at Dajianfu 大薦福 Monastery in Chang'an 長安. There he took on a central role in the translation of Sanskrit Buddhist sutra, receiving an imperial commission to serve in the position of *bishou* 筆受, an official scribe and translator. In the year 780 AD Hyecho went to the Wutai 五台 Mountain and he died there sometime between 780 AD and 783AD.

Based on his trip to India during 723 AD and 727 AD, Hyecho wrote a travelogue entitled *Wang o cheonchuk guk jeon* 往五天竺國傳 (Memoir of the Pilgrimage to the Five Kingdoms of India) (hereafter *Memoir*). The travelogue was lost for many years, while in 1905 Paul Pelliot discovered a fragment of it in Dunhuang 敦煌. Though there is now only one fragmentary manuscript of Hyecho's Memoirs, it is thought that the work originally comprised three volumes. In *HLYY* there is an entry stating that Hyecho's account was split up into three volumes. Given this, it seems that the extant version of the *Memoir* is an excerpt version of this book.

In this study we will compare the transliteration of the same place names done by Xuanzang's 玄奘 (602-664 AD) *Xiyuji* and Hyecho's *Memoir*, paying special attention to the [t] coda characters. *Xiyuji* was written in 646 by Xuanzang. Roughly speaking, *Xiyuji* was compiled about more than half a century earlier than the *Memoir*. The table below lists some different transliterations between Xuanzang and Hyecho. The Sanskrit name for these place names are cited from Ji Xianlin 季羨林 (1985). It should be noted that all of Hyecho's transliterations in the following table, according to our search in the electronic version of *Siku quanshu* 四庫全書 (Wenyuange 文淵閣 edition), first occurred in Hyecho's *Memoir*. Therefore, these transliterations are not what Hyecho adopted from other books.

(9)

Xuanzang	Hyecho	Sanskrit
波謎羅	播蜜	pamir
蘇伐刺拏瞿咄羅	蘇跋那具怛羅	suvarṇagotra
那迦羅馱那	那揭羅馱娜	nagaradhana
怖捍	跋賀郛	ferghana

The above chart gives us the following two hints. First, in the first two examples, Hyecho used only one [t] coda character, *mi* 蜜 or *ba* 跋, to reflect the [r] coda in Sanskrit. Xuanzang, however, used a [l] initial character, *luo* 羅 or *la* 剌, in addition to a [t] coda character *mi* 謎 or *fa* 伐, to reflect the [r] coda. In other words, it is necessary for Xuanzang to indicate the [r] coda through a [l] initial character, whereas it is redundant

for Hyecho. Second, in the case of *nagaradhana*, the *-ga*, which is followed by a [r] initial syllable, is transliterated with an open syllable *jia* 迦 by Xuanzang, but a MC [t] coda character *jie* 揭 by Hyecho. Third, in the case of *ferghana*, Xuanzang used the open syllable character *bu* 怖 to transcribe the *fer*, while Hyecho used the MC [t] coda character *ba* 跋 to do so. These three differences show that the alveolar consonant (non-nasal) coda in Hyecho's language is rather close to the [l] ([r]) sound, suggesting that the [t] coda in Middle Chinese was probably pronounced as [l] in Sino-Korean in the early eighth century.

Kang (2010) explains the origin of *-l* coda as a customary reading first occurred in Buddhist temple, hypothesizing that in order to be faithful to the original *-r* or *-l* coda in Sanskrit, the *-t* coda characters in the Chinese translated Buddhist classics were pronounced with an *-l* coda by Korean monks. However, it is hard for Kang (2010) to explain why Korean monks only concerned about the faithfulness to the Sanskrit *-l* coda. Shen (2004) argued that the [t] coda became [l] through the following process: CVt>CVtV>CVrV>CVr. According to Shen (2004), Old Korean is an open syllable language, like Japanese, which does not have consonantal coda. He proposed that Korean underwent a process of shortening of multi-syllables and the *-t* between two vowels changed to *-l*. Later the deletion of vowel in the second syllable brought about the *-l* coda in SK. Shen's analysis is built on the premise that Old Korean is an open language, which is still controversial. Although some scholars argued that Old Korean was an open syllable language, the periodizations of Old Korean are not consistent in different studies. Also, if the proposed shortening did happen in Old Korean, it is difficult to explain why this change only applied to Sino-Korean and had no influence to native Korean words,

such as [pat] "field" and [nat] "sickle". Pak (1971) claimed that the [t] coda in Middle Chinese was represented with [l] in Korean because for some unknown reason SK avoids to adapt the MC [t] as [t]. This is hard to explain since there is no obvious reason to avoid a faithful representation. This study tends to believe that *-t* coda had not occurred in Korean in the time of borrowing. As a result, the *-t* coda was represented as *-l*, which share the same place of articulation with *-t*. However, this explanation needs to be testified by more research on the coda system in Old Korean. In addition, we need to explain how the word [put] 𣪠 "writing brush, pen" in native Korean, which is widely accepted as a loanword from Old Chinese [put] 筆, can preserve the *-t* coda successfully.

Chapter 7 Conclusion

The aim of the present study is to examine the origin of Modern SK. As noted in previous chapters, SK includes inconsistency in the representation. Below we will discuss the matrix of the mainstream representation first, and then move to the discussion on the origin of non-mainstream representation.

7.1 The matrix of mainstream SK

In order to identify the mainstream forms in the earliest extant SK data, in Chapter 3, Chapter 4 and Chapter 5 we examined the initial, rhyme and tones in *Hunmong jahoe* 訓蒙字會 (1527), the earliest character dictionary in Korea that uses Hangul to notate the reading of characters. The reading in this book shows that due to the mismatch in the phonological system between Chinese and Korean, the deletion and replacement strategies are adopted in SK. For example, the *yi* 疑 initial and the *ying* 影 initial are represented as the zero-initial. The *zhuang* 莊 series (retroflex affricates and fricatives), the *zhang* 章 series (palatal affricates and fricatives), and the *jing* 精 series (alveolar affricates and fricatives) are represented as the same type, namely alveolar affricates and fricatives. Moreover, the glides in Middle Chinese are always simplified with the process of adaptation, such as *hekou fei* 廢 rhyme [^wjai]→[iəi], *hekou yuan* 元 rhyme [^wiɤn]→[uən] and *hekou yang* 陽 rhyme [^wiaŋ]→[oɑŋ].

The SK system shown in *HMJH* provides the following valuable hints regarding the origin of Modern SK.

(1)

I. Initial

- ① The labial-dental *fei* 非 series has not occurred.
- ② The *yun* 云 initial is separated from the *xia* 匣 initial.
- ③ The *zhi* 知 series has not become affricative or fricative.
- ④ The *chan* 禪 initial and the *chuan* 船 initial belong to the same category.
- ⑤ The *ri* 日 initial has lost its nasality.

II. rhyme

- ⑥ *Chongyun* 重韻 exists in the pair of *hai* 哈 and *tai* 泰.
- ⑦ *Chongyun* 重韻 exists in the pair of *yu* 魚 and *yu* 虞.
- ⑧ *Chongyun* 重韻 exists in the pair of *zhen* 真 and *yin* 殷.
- ⑨ *Chongyun* 重韻 exists in the pair of *zhi* 質 and *qi* 迄.
- ⑩ *Chongyun* 重韻 exists in the pair of *dong* 東 (div.3) and *zhong* 鍾.
- ⑪ *Chongyun* 重韻 exists in the pair of *wu* 屋 and *zhu* 燭.
- ⑫ Fourth division rhymes have -*j* glide.
- ⑬ The distinction of Middle Chinese -*p*, -*t*, and -*k* codas are preserved.

After indentifying these features, we compared them with different works of Chinese, including *Qieyun* (601), Xuanying's 玄應 (?-661) *Yiqie jing yinyi* 一切經音義, He Chao's 何超 *Jinshu yinyi* 晉書音義, Huilin's 慧琳 (737–820) *Yiqie jing yinyi* 一切經音義, *Shengyin changhe tu* 聲音唱和圖 and *Qieyun zhizhang tu* 切韻指掌圖. The chart below lists the result of our comparison. The time and dialect background of each book is

provided for reference. If a certain material is consistent with SK in that feature, we marked it with "+", if different with "-", and with "?" if not clear.

(2)

	Qieyun	XYYY	JSYY	HLYY	SYCHT	QYZZT
Time	601	c.650	747	810	c.1050	c.12 th century
Area	Luoyang Nanjing	Chang'an	Luoyang	Chang'an	Kaifeng Luoyang	Kaifeng
1	+	+	+	-	-	-
2	-	-	+	+	+	+
3	+	+	+	+	+	+
4	-	-	-	+	+	+
5	-	?	?	?	+	+
6	+	+	-	-	-	-
7	+	+	-	+	-	-
8	+	+	+	-	-	-
9	+	+	+	-	-	-
10	+	+	+	-	-	-
11	+	+	+	-	-	-
12	-	+	-	+	+	+
13	+	+	+	+	-	-

The above chart can be summarized as follows: First, the Song Dynasty materials *SYCHT* and *QYZZT* do not agree with SK in no.1, no.6-11 and no.13. Second, the *Qieyun* system does not agree with SK in no.2, no.4, no.5 and no.12. Third, *XYYY* does not agree with SK in no.2 and no.4. Fourth, *HLYY* does not agree with SK in no.1, no.6 and no.8-11. Fifth, *JSYY* does not agree with SK in no.4, no.6, no.7 and no.12. Sixth, *HLYY* agrees well with SK on those points that *XYYY* does not agree with SK. And for those points that

HLYY does not agree with SK, *XXXX* agrees with SK perfectly. This shows that the mainstream SK is a reflection of Chinese later than *XXXX* (c. 650 AD) but earlier than *HLYY* (810 AD). Given the fact that the *fanqie* in *XXXX* and *HLYY* is based on the pronunciation of the Chang'an 長安 dialect, this study proposes that the matrix of Modern SK is borrowed from the Chang'an dialect between 650 AD and 810 AD.

7.2 The non-mainstream representations in SK

Besides the mainstream representation, the readings of some characters in Middle SK are inconsistent with the mainstream representation. The primary reason for non-mainstream reading is the analogy of phonetic radicals, such as 吉(质 rhyme)>桔苦 [kil], 危(支 rhyme)>桅 [ui], 者(麻 rhyme)>煮翫[tsia], 粹(脂 rhyme)>燂[siu], 螳(支 rhyme)>磴[iɪ], 叉(麻 rhyme)>釵[tsʰa], 氏底低(齊 rhyme)>舐[tɕi], 台(哈 rhyme)>答[tʰai], 宰(哈 rhyme)>滓[tsai], 丹(寒 rhyme)>坍 [tan], etc. Second, the readings of some characters are borrowed from Old Mandarin, such as 驪[lo], 蒜[suən], 刷[soa], and 雙[soaŋ], or influenced by the *fanqie* in Old Mandarin rhyme books, such as *Hongwu zhengyun*. Third, the [ʌ] reading in the *zhi* rhyme group is a reflection of the Song Dynasty Chinese. Fourth, the reading of some characters may be a reflection of Old Chinese, such as 譖[tsʰʌm], 簪[tsʌm], 涔[tsʌm] and 蓼[sʌm]. However, there is always no decisive evidence to claim these readings must be borrowed from Old Chinese since they may be the result of analogy or the unfaithful representation in the process of loanword adaptation. Therefore, more research is still needed to test the reliability of the Old Chinese origin hypothesis for these characters.

It is noteworthy that when SK has two or more correspondences for one MC form, previous studies always tend to explain these different representations as different layers which are borrowed from Chinese at different stages. The assumption under this analysis is that the same source form in Chinese must be adapted as the same form in Korean. However, the Mandarin loanwords in Modern Korean provide persuasive evidence that the same source form in Chinese may be adapted as two different forms in Korean. Different borrowers may adopt different strategies in the process of borrowing. What is the best or the most faithful way to transcribe loanwords could be different from one person's mind to another's. And even for the same form in the source language, the same borrower may propose different adapted forms for different words. Therefore, some of these different representations in SK may not be a reflection of different layers, but results from different adaptations of the same source form.

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Appendix

This appendix is a chart showing the readings of the 3,360 characters in *HMJH* (YS edition). The characters in this chart are arranged according to the order they appear in *HMJH*. Each character is provided with the initial, rhyme, tone information found in *Guangyun* as well as the phonetic and phonemic reconstruction form in Pan and Zhang (2013). In addition, the reading in Modern SK is also provided for reference. For a detailed explanation about the transcription of Modern Korean, please refer to Chapter 2. In the process of making this chart, we mainly used the following three websites.

1. <http://www.eastling.org/tdfweb/midage.aspx>

This website provides the initial, rhyme, tone information of each character found in *Guangyun*.

2. <http://www.zdic.net/>

This website provides the *fanqie* in *Kangxi zidian* 康熙字典 (*Kangxi* dictionary), which includes the *fanqie* in *Guangyun*, *Jiyun* etc. This website was used when some obscure characters are not included in the first website.

3. <http://hanja.naver.com/>

This website is a widely used online character dictionary in Korea.

When a character in *HMJH* has more than one reading in *Guangyun*, the Middle Chinese initial, rhyme and tone information is given based on the reading for the meaning that occurs in *HMJH*. Some characters that appear in *HMJH* are the variant forms that are not widely used currently. These characters have been changed to the widely used forms in this chart. For example, 𪚩, 𪚪, 𪚫 have been changed into 器, 踢, 聰 respectively in this chart.

	Character	Rhyme group	Rhyme	Initial	Kaihe	Division	Tone	Qieyun (phonetic)	Qieyun (phonemic)	HMJH (segmental)	HMJH (Tone)	Modern SK
1	天	山	先	透	<i>kaikou</i>	4	<i>ping</i>	t ^h en	t ^h en	t ^h iən	L	tɕ ^h ʌn
2	地	止	脂	定	<i>kaikou</i>	3	<i>qu</i>	di	di	ti	H	tɕi
3	霄	效	宵	心	<i>kaikou</i>	3	<i>ping</i>	sieu	sieu	sio	L	so
4	壤	宕	陽	日	<i>kaikou</i>	3	<i>shang</i>	ɲiaŋ	ɲiaŋ	ziaŋ	L	jaŋ
5	乾	山	仙	群	<i>kaikou</i>	3B	<i>ping</i>	g ^y iɛn	g ^y iɛn	kən	L	kʌn
6	坤	臻	魂	溪	<i>hekou</i>	1	<i>ping</i>	k ^h uon	k ^h uon	kon	L	kon
7	宇	遇	虞	云	<i>hekou</i>	3	<i>shang</i>	ɦiuo	ɦiuo	u	R	u
8	宙	流	尤	澄	<i>kaikou</i>	3	<i>qu</i>	d̪iu	d̪iəu	tiu	R	tɕeu
9	日	臻	質	日	<i>kaikou</i>	3	<i>ru</i>	ɲit	ɲit	zil	H	il
10	月	山	月	疑	<i>hekou</i>	3	<i>ru</i>	ɲ ^w iɪt	ɲ ^w iot	uəl	H	wʌl
11	星	梗	青	心	<i>kaikou</i>	4	<i>ping</i>	seŋ	seŋ	siəŋ	L	sʌŋ
12	辰	臻	真	禪	<i>kaikou</i>	3	<i>ping</i>	dzin	dzin	sin	L	sin
13	陰	深	侵	影	<i>kaikou</i>	3B	<i>ping</i>	ʔ ^y im	ʔ ^y im	im	L	um
14	陽	宕	陽	以	<i>kaikou</i>	3	<i>ping</i>	jiaŋ	jiaŋ	iaŋ	L	jaŋ
15	節	山	屑	精	<i>kaikou</i>	4	<i>ru</i>	tset	tset	tsiəl	H	tɕəl
16	候	流	侯	匣	<i>kaikou</i>	1	<i>qu</i>	ɦu	ɦu	hu	R	hu
17	春	臻	諄	昌	<i>hekou</i>	3	<i>ping</i>	tɕ ^h wim	tɕ ^h wim	ts ^h iun	L	tɕ ^h un

18	夏	假	麻	匣	<i>kaikou</i>	2	<i>qu</i>	ɸ ^ʷ æ	ɸ ^ʷ a	ha	L	ha
19	秋	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iu	ts ^h iəu	ts ^h iu	L	tɕ ^h u
20	冬	通	冬	端	<i>hekou</i>	1	<i>ping</i>	t _u oŋ	t _u oŋ	toŋ	L	toŋ
21	晝	流	尤	知	<i>kaikou</i>	3	<i>qu</i>	t _i u	t _i əu	tiu	R	tɕeu
22	夜	假	麻	以	<i>kaikou</i>	3	<i>qu</i>	jiæ	jia	ia	R	ja
23	寒	山	寒	匣	<i>kaikou</i>	1	<i>ping</i>	ɸan	ɸan	han	L	han
24	暑	遇	魚	書	<i>hekou</i>	3	<i>shang</i>	ɕiɿ	ɕio	siə	R	sɿ
25	晌	宕	陽	書	<i>kaikou</i>	3	<i>shang</i>	ɕiaŋ	ɕiaŋ	siaŋ	H	saŋ
26	晚	山	元	微	<i>hekou</i>	3	<i>shang</i>	m ^w iɿn	m ^w ion	man	R	man
27	昏	臻	魂	曉	<i>hekou</i>	1	<i>ping</i>	h _u oŋ	h _u oŋ	hon	L	hon
28	暮	遇	模	明	<i>hekou</i>	1	<i>qu</i>	m _u o	m _u o	mo	R	mo
29	早	效	豪	精	<i>kaikou</i>	1	<i>shang</i>	tsau	tsau	tso	R	tɕo
30	晨	臻	真	禪	<i>kaikou</i>	3	<i>ping</i>	dzin	dzin	sin	L	sin
31	曉	效	蕭	曉	<i>kaikou</i>	4	<i>shang</i>	heu	heu	hio	R	hjo
32	曙	遇	魚	禪	<i>hekou</i>	3	<i>qu</i>	dzɿɿ	dzio	siə	R	sɿ
33	朔	江	覺	生	<i>kaikou</i>	2	<i>ru</i>	ʂ ^ʷ ɔk	ʂ ^ʷ ok	sak	H	sak
34	旬	臻	諄	邪	<i>hekou</i>	3	<i>ping</i>	z ^w m	z ^w in	siun	L	sun
35	望	宕	陽	微	<i>kaikou</i>	3	<i>ping</i>	miaŋ	miaŋ	maŋ	R	maŋ
36	晦	蟹	灰	曉	<i>hekou</i>	1	<i>qu</i>	h _u oi	h _u oi	hoi	R	hø
37	宵	效	宵	心	<i>kaikou</i>	3	<i>ping</i>	siɕu	sieu	sio	L	so

38	旦	山	寒	端	<i>kaikou</i>	1	<i>qu</i>	tan	tan	tan	R	tan
39	朝	效	宵	知	<i>kaikou</i>	3	<i>ping</i>	ɕieu	ɕieu	tio	L	tɕo
40	夕	梗	昔	邪	<i>kaikou</i>	3	<i>ru</i>	ziɛk	ziek	siək	H	sɰk
41	歲	蟹	祭	心	<i>hekou</i>	3	<i>qu</i>	s ^w iei	s ^w iei	siəi	R	se
42	年	山	先	泥	<i>kaikou</i>	4	<i>ping</i>	nen	nen	niən	L	njɰn
43	閏	臻	諄	日	<i>hekou</i>	3	<i>qu</i>	ŋ ^w in	ŋ ^w in	ziun	L	jun
44	臘	咸	盍	來	<i>kaikou</i>	1	<i>ru</i>	lap	lap	nap	H	lap
45	時	止	之	禪	<i>kaikou</i>	3	<i>ping</i>	dzi	dziə	si	L	si
46	晷	止	脂	見	<i>hekou</i>	3B	<i>shang</i>	k ^w i	k ^w i	ku	H	ku
47	漏	流	侯	來	<i>kaikou</i>	1	<i>qu</i>	lu	lu	lu	R	lu
48	刻	曾	德	溪	<i>kaikou</i>	1	<i>ru</i>	k ^h ək	k ^h ək	kɰk	H	kak
49	雷	蟹	灰	來	<i>hekou</i>	1	<i>ping</i>	l ^w oi	l ^w oi	loi	L	lø
50	電	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	tɕɰn
51	霹	梗	錫	滂	<i>kaikou</i>	4	<i>ru</i>	p ^h ek	p ^h ek	piək	H	pjɰk
52	靨	梗	錫	來	<i>kaikou</i>	4	<i>ru</i>	lek	lek	liək	H	ljɰk
53	風	通	東	非	<i>hekou</i>	3	<i>ping</i>	piuŋ	piuŋ	p ^h uŋ	L	p ^h uŋ
54	雨	遇	虞	云	<i>hekou</i>	3	<i>shang</i>	fiɤʊ	fiɤʊ	u	R	u
55	霜	宕	陽	生	<i>kaikou</i>	3	<i>ping</i>	ɕiaŋ	ɕiaŋ	saŋ	L	saŋ
56	露	遇	模	來	<i>hekou</i>	1	<i>qu</i>	lɤʊ	lɤʊ	lo	R	lo
57	雪	山	薛	心	<i>hekou</i>	3	<i>ru</i>	s ^w iɛt	s ^w iɛt	siəl	H	sɰl

58	霰	山	先	心	<i>kaikou</i>	4	<i>qu</i>	sen	sen	siən	R	sən
59	冰	曾	蒸	幫	<i>kaikou</i>	3	<i>ping</i>	piŋ	piəŋ	piŋ	L	piŋ
60	雹	江	覺	並	<i>kaikou</i>	2	<i>ru</i>	b ^ʷ ək	b ^ʷ ok	pak	H	pak
61	雲	臻	文	云	<i>hekou</i>	3	<i>ping</i>	fiun	fiun	un	L	un
62	霞	假	麻	匣	<i>kaikou</i>	2	<i>ping</i>	fi ^ʷ æ	fi ^ʷ a	ha	L	ha
63	嵐	咸	覃	來	<i>kaikou</i>	1	<i>ping</i>	ləm	ləm	nam	L	lam
64	霧	遇	虞	微	<i>hekou</i>	3	<i>qu</i>	mi ^ʷ o	mi ^ʷ o	mu	R	mu
65	虹	通	東	匣	<i>hekou</i>	1	<i>ping</i>	fiuŋ	fiuŋ	hoŋ	L	hoŋ
66	霓	蟹	齊	疑	<i>kaikou</i>	4	<i>ping</i>	ŋei	ŋei	iəi ³⁷³	L	je
67	蜩	蟹	齊	端	<i>kaikou</i>	4	<i>qu</i>	tei	tei	t ^h iəi	H	tɛ ^h e
68	蝻	通	東	端	<i>hekou</i>	1	<i>shang</i>	tuŋ	tuŋ	toŋ	R	toŋ
69	霖	深	侵	來	<i>kaikou</i>	3	<i>ping</i>	lim	lim	lim	L	lim
70	漣	通	東	端	<i>hekou</i>	1	<i>ping</i>	tuŋ	tuŋ	toŋ	R	toŋ
71	滂	效	豪	來	<i>kaikou</i>	1	<i>qu</i>	lau	lau	lo	H	lo
72	旱	山	寒	匣	<i>kaikou</i>	1	<i>shang</i>	fiən	fiən	han	R	han
73	山	山	山	生	<i>kaikou</i>	2	<i>ping</i>	ʂ ^ʷ en	ʂ ^ʷ en	san	L	san
74	嶽	江	覺	疑	<i>kaikou</i>	2	<i>ru</i>	ŋ ^ʷ ək	ŋ ^ʷ ok	ak	H	ak
75	峯	通	鍾	敷	<i>hekou</i>	3	<i>ping</i>	p ^h i ^ʷ oŋ	p ^h i ^ʷ oŋ	poŋ	L	poŋ

³⁷³Also [iəl] (R tone)(山屑疑開 4 入 [ŋet] [ŋet] [iək])

76	岫	流	尤	邪	<i>kaikou</i>	3	<i>qu</i>	ziu	ziəu	siu	H	su
77	壑	宕	鐸	曉	<i>kaikou</i>	1	<i>ru</i>	hak	hak	hak	H	hak
78	谷	通	屋	見	<i>hekou</i>	1	<i>ru</i>	kuk	kuk	kok ³⁷⁴	H	kok
79	崖	蟹	佳	疑	<i>kaikou</i>	2	<i>ping</i>	ŋ ^y ɛ	ŋ ^y e	ai	L	æ
80	岸	山	寒	疑	<i>kaikou</i>	1	<i>qu</i>	ŋan	ŋan	an	R	an
81	巖	咸	銜	疑	<i>kaikou</i>	2	<i>ping</i>	ŋ ^y æm	ŋ ^y am	am	L	am
82	嶂	宕	陽	章	<i>kaikou</i>	3	<i>qu</i>	teiaŋ	teiaŋ	tsiaŋ	R	teəŋ
83	嶺	梗	清	來	<i>kaikou</i>	3	<i>shang</i>	lieŋ	lieŋ	liəŋ	R	ljʌŋ
85	峴	山	先	匣	<i>kaikou</i>	4	<i>shang</i>	fiɛn	fiɛn	hiəŋ	R	hjʌŋ
85	崗	宕	唐	見	<i>kaikou</i>	1	<i>ping</i>	kaŋ	kaŋ	kaŋ	L	kaŋ
86	巔	山	先	端	<i>kaikou</i>	4	<i>ping</i>	ten	ten	tiəŋ	L	tɕʌŋ
87	峒	通	東	定	<i>hekou</i>	1	<i>qu</i>	duŋ	duŋ	toŋ	R	toŋ
88	麓	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	lok	H	lok
89	丘	流	尤	溪	<i>kaikou</i>	3	<i>ping</i>	k ^h iu	k ^h əu	ku	L	ku
90	原	山	元	疑	<i>hekou</i>	3	<i>ping</i>	ŋ ^w iɛn	ŋ ^w ion	uəŋ	L	wʌŋ
91	阜	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	kau	kau	ko	L	ko
92	阜	流	尤	奉	<i>kaikou</i>	3	<i>shang</i>	biu	biəu	pu	R	pu
93	坡	果	戈	滂	<i>hekou</i>	1	<i>ping</i>	p ^{hw} a	p ^{hw} a	p ^h a	L	p ^h a

³⁷⁴Also [iok] (H tone)(通燭以合 3 入 [iɤok] [iɤok][iok])

94	阪	山	元	非	<i>hekou</i>	3	<i>shang</i>	p ^w iɤn	p ^w ion	p ^h an	H	p ^h an
95	陵	曾	蒸	來	<i>kaikou</i>	3	<i>ping</i>	liŋ	liəŋ	liŋ	L	luŋ
96	陸	通	屋	來	<i>hekou</i>	3	<i>ru</i>	liuk	liuk	liuk	H	ljuk
97	泥	蟹	齊	泥	<i>kaikou</i>	4	<i>ping</i>	nei	nei	ni	L	ni
98	土	遇	模	透	<i>hekou</i>	1	<i>shang</i>	t ^h uo	t ^h uo	t ^h o	H	t ^h o
99	塢	咸	覃	溪	<i>kaikou</i>	1	<i>qu</i>	k ^h əm	k ^h əm	kam	R	kam
100	埕	山	屑	定	<i>kaikou</i>	4	<i>ru</i>	det	det	til	H	tɛil
101	郊	效	肴	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ æu	k ^ʷ au	kio	L	kjo
102	甸	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	tɛɤn
103	坪	梗	庚	並	<i>kaikou</i>	3	<i>ping</i>	biəŋ	bian	p ^h iəŋ	L	p ^h jɤŋ
104	野	假	麻	以	<i>kaikou</i>	3	<i>shang</i>	jiæ	jia	ia	R	ja
105	礪	宕	陽	見	<i>kaikou</i>	3	<i>ping</i>	kiaŋ	kiaŋ	kaŋ	L	kaŋ
106	礫	梗	錫	來	<i>kaikou</i>	4	<i>ru</i>	lek	lek	lik	H	liɤk
107	沙	假	麻	生	<i>kaikou</i>	2	<i>ping</i>	ɕ ^ʷ æ	ɕ ^ʷ a	sa	L	sa
108	磧	梗	昔	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h iɛk	ts ^h iek	tsiək	H	tɛɤk
109	礁	效	宵	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛu	tsieu	ts ^h io	L	tɛ ^h o
110	石	梗	昔	禪	<i>kaikou</i>	3	<i>ru</i>	dziɛk	dziek	siək	H	sɤk
111	島	效	豪	端	<i>kaikou</i>	1	<i>shang</i>	tau	tau	to	R	to
112	嶼	遇	魚	邪	<i>hekou</i>	3	<i>shang</i>	ziɻ	zio	siə	R	sɤ
113	湖	遇	模	匣	<i>hekou</i>	1	<i>ping</i>	ɦuo	ɦuo	ho	L	ho

114	海	蟹	哈	曉	<i>kaikou</i>	1	<i>shang</i>	həi	həi	hɿ	R	hæ
115	淵	山	先	影	<i>kaikou</i>	4	<i>ping</i>	ʔen	ʔen	iən	L	jan
116	川	山	仙	昌	<i>hekou</i>	3	<i>ping</i>	tɕ ^{hw} iɛn	tɕ ^{hw} ien	tɕ ^h iən	L	tɕ ^h ɿn
117	溪	蟹	齊	溪	<i>kaikou</i>	4	<i>ping</i>	k ^h ei	k ^h ei	kiəi	L	kje
118	澗	山	刪	見	<i>kaikou</i>	2	<i>qu</i>	k ^y æn	k ^y an	kan	R	kan
119	江	江	江	見	<i>kaikou</i>	2	<i>ping</i>	kəŋ	koŋ	kaŋ	L	kaŋ
120	河	果	歌	匣	<i>kaikou</i>	1	<i>ping</i>	ɦa	ɦa	ha	L	ha
121	汀	梗	青	透	<i>kaikou</i>	4	<i>ping</i>	t ^h eŋ	t ^h eŋ	tiəŋ	L	tɕɿŋ
122	洲	流	尤	章	<i>kaikou</i>	3	<i>ping</i>	tɕiu	tɕəu	tsiu	L	tɕeu
123	渚	遇	魚	章	<i>hekou</i>	3	<i>shang</i>	tɕiɤ	tɕio	tsiə	R	tɕɿ
124	沚	止	之	章	<i>kaikou</i>	3	<i>shang</i>	tɕi	tɕə	tsi	H	tɕi
125	濤	效	豪	定	<i>kaikou</i>	1	<i>ping</i>	dau	dau	to	L	to
126	浪	宕	唐	來	<i>kaikou</i>	1	<i>qu</i>	laŋ	laŋ	laŋ	R	laŋ
127	瀾	山	寒	來	<i>kaikou</i>	1	<i>ping</i>	lan	lan	lan	L	lan
128	波	果	戈	幫	<i>hekou</i>	1	<i>ping</i>	p ^w a	p ^w a	p ^h a	L	p ^h a
129	津	臻	真	精	<i>kaikou</i>	3	<i>ping</i>	tsin	tsin	tsin	L	tein
130	梁	宕	陽	來	<i>kaikou</i>	3	<i>ping</i>	liəŋ	liəŋ	liəŋ	L	liəŋ
131	潮	效	宵	澄	<i>kaikou</i>	3	<i>ping</i>	ɕiəu	ɕiəu	tio	L	tɕo
132	汐	梗	昔	邪	<i>kaikou</i>	3	<i>ru</i>	ziɛk	ziɛk	siək	H	sək
133	灘	山	寒	透	<i>kaikou</i>	1	<i>ping</i>	t ^h an	t ^h an	t ^h an	L	t ^h an

134	瀨	蟹	泰	來	<i>kaikou</i>	1	<i>qu</i>	lai	lai	loi	R	lø
135	湍	山	桓	透	<i>hekou</i>	1	<i>ping</i>	t ^h wan	t ^h wan	tan	L	tan
136	渦	果	戈	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w a	ʔ ^w a	oa	L	wa
137	浦	遇	模	滂	<i>hekou</i>	1	<i>shang</i>	p ^h uo	p ^h uo	po	R	p ^h o
138	澈	遇	魚	邪	<i>hekou</i>	3	<i>shang</i>	ziɿ	zio	siə	R	sʌ
139	港	江	江	見	<i>kaikou</i>	2	<i>shang</i>	kəŋ	koŋ	haŋ	R	haŋ
140	汊	假	麻	初	<i>kaikou</i>	2	<i>qu</i>	tɕ ^h æ	tɕ ^h a	ts ^h a	L	tɕ ^h a
141	井	梗	清	精	<i>kaikou</i>	3	<i>shang</i>	tsiɛŋ	tsieŋ	tsiəŋ	R	tɕʌŋ
142	泉	山	仙	從	<i>hekou</i>	3	<i>ping</i>	dz ^w iɛn	dz ^w ien	ts ^h iən	L	tɕ ^h ʌn
143	沼	效	宵	章	<i>kaikou</i>	3	<i>shang</i>	tɕiɛu	tɕieu	sio	R	so
144	塘	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
145	洋	宕	陽	以	<i>kaikou</i>	3	<i>ping</i>	jaŋ	jaŋ	iaŋ	L	jaŋ
146	派	蟹	佳	滂	<i>kaikou</i>	2	<i>qu</i>	p ^h ɛ	p ^h e	p ^h ai	R	p ^h æ
147	瀆	臻	文	奉	<i>hekou</i>	3	<i>ping</i>	biun	biun	pun	L	pun
148	涯	蟹	佳	疑	<i>kaikou</i>	2	<i>ping</i>	ŋ ^y ɛ	ŋ ^y e	ai	L	æ
149	潭	咸	覃	定	<i>kaikou</i>	1	<i>ping</i>	dəm	dəm	tam	L	tam
150	湫	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iu	ts ^h iəu	ts ^h iu	L	tɕ ^h u
151	涔	深	侵	崇	<i>kaikou</i>	3	<i>ping</i>	dzim	dzim	tsʌm	L	tɕʌm
152	瀧	江	江	生	<i>kaikou</i>	2	<i>ping</i>	ɕəŋ	ɕoŋ	saŋ	L	saŋ
153	沮	遇	魚	清	<i>hekou</i>	3	<i>ping</i>	ts ^h iɿ	ts ^h io	tsiə	L	tɕʌ

154	洳	遇	魚	日	hekou	3	ping	ɲiɣ	ɲio	ziə	L	jʌ
155	窪	假	麻	影	hekou	2	ping	ʔ ^w æ	ʔ ^w a	oa	L	wa
156	澤	梗	陌	澄	kaikou	2	ru	ɕ ^ʷ æk	ɕ ^ʷ ak	tʰʌik	H	tʰæk
157	洿	遇	模	影	hekou	1	ping	ʔ _{uo}	ʔ _{uo}	o	L	o
158	潢	宕	唐	匣	hekou	1	ping	ɦ ^w aŋ	ɦ ^w aŋ	hoan	L	hwaŋ
159	瀦	遇	魚	知	hekou	3	ping	ʈiɣ	ʈio	tiə	L	tɛʌ
160	陂	止	支	幫	kaikou	3B	ping	p ^ʷ iɛ	p ^ʷ ie	pʰi	L	pʰi
161	潦	效	豪	來	kaikou	1	shang	lau	lau	lio	R	ljo
162	洪	通	東	匣	hekou	1	ping	ɦuŋ	ɦuŋ	hoŋ	L	hoŋ
163	泡	效	肴	滂	kaikou	2	ping	pʰ ^ʷ æu	pʰ ^ʷ au	pʰo	L	pʰo
164	漚	流	侯	影	kaikou	1	qu	ʔu	ʔu	ku	L	ku
165	淀	山	先	定	kaikou	4	qu	den	den	tiən	R	tɛʌn
166	灤	宕	鐸	滂	kaikou	1	ru	pʰak	pʰak	pak	H	pak
167	蕩	宕	唐	定	kaikou	1	shang	daŋ	daŋ	tʰaŋ	L	tʰaŋ
168	湄	止	脂	明	kaikou	3B	ping	m ^ʷ i	m ^ʷ i	mi	L	mi
169	路	遇	模	來	hekou	1	qu	l _{uo}	l _{uo}	lo	R	lo
170	途	遇	模	定	hekou	1	ping	d _{uo}	d _{uo}	to	L	to
171	徑	梗	青	見	kaikou	4	qu	keŋ	keŋ	kiəŋ	R	kjʌŋ
172	蹊	蟹	齊	匣	kaikou	4	ping	ɦei	ɦei	kiəi	L	kje
173	衢	遇	虞	群	hekou	3	ping	gi _u ɔ	gi _u o	ku	L	ku

174	達	止	脂	群	hekou	3B	ping	g ^w ɿ	g ^w ɿ	kiu	L	kju
175	岔	假	麻	初	kaikou	2	qu	tɕ ^h ɿæ	tɕ ^h ɿa	ts ^h a	L	tɕ ^h a
176	歧	止	支	群	kaikou	3A	ping	giɛ	gie	ki	L	ki
177	堤	蟹	齊	端	kaikou	4	ping	tei	tei	tiəi	L	tɕe
178	堰	山	元	影	kaikou	3	qu	ʔiɿn	ʔion	ən	R	ʌn
179	牯	咸	洽	崇	kaikou	2	ru	dz ^ɿ ɛp	dz ^ɿ ɛp	tsap	H	tɕap
180	壩	假	麻	幫	kaikou	2	qu	p ^ɿ æ	p ^ɿ a	p ^h ai	R	p ^h æ
181	衡	遇	模	匣	hekou	1	ping	ɦɿo	ɦɿo	ho	L	ho
182	衙	通	東	定	hekou	1	qu	duŋ	duŋ	ton	R	ton
183	巷	江	江	匣	kaikou	2	qu	ɦioŋ	ɦioŋ	haŋ	R	haŋ
184	陌	梗	陌	明	kaikou	2	ru	m ^ɿ æk	m ^ɿ ak	mɿik	L	mæk
185	關	山	刪	見	hekou	2	ping	k ^w ɿæn	k ^w ɿan	koan ³⁷⁵	H	kwan
186	隘	蟹	佳	曉	kaikou	2	qu	ʔ ^ɿ ɛ	ʔ ^ɿ e	ɿik	H	æk
187	塞	蟹	哈	心	kaikou	1	shang	səi	səi	sɿi	H	sæ
188	徼	效	蕭	見	kaikou	4	qu	keu	keu	kio	H	kjo
189	境	梗	庚	見	kaikou	3	shang	kiæŋ	kiaŋ	kiəŋ	R	kjɿŋ
190	界	蟹	皆	見	kaikou	2	qu	k ^ɿ ei	k ^ɿ ei	kiəi	R	kje
191	疆	宕	陽	見	kaikou	3	ping	kiaŋ	kiaŋ	kaŋ	L	kaŋ

³⁷⁵The meaning for this reading is "crossroad". It is [koan] (L tone) when the meaning is "to close, to shut".

192	域	曾	職	云	<i>hekou</i>	3	<i>ru</i>	<i>ɸ^wik</i>	<i>ɸ^wiək</i>	<i>iək</i>	H	<i>jək</i>
193	田	山	先	定	<i>kaikou</i>	4	<i>ping</i>	<i>den</i>	<i>den</i>	<i>tiən</i>	L	<i>tɛɰn</i>
194	園	山	元	云	<i>hekou</i>	3	<i>ping</i>	<i>ɸ^wiɤn</i>	<i>ɸ^wion</i>	<i>uən</i>	L	<i>wɰn</i>
195	場	宕	陽	澄	<i>kaikou</i>	3	<i>ping</i>	<i>ɕiɑŋ</i>	<i>ɕiɑŋ</i>	<i>tiaŋ</i>	L	<i>tɛɑŋ</i>
196	圃	遇	模	幫	<i>hekou</i>	1	<i>shang</i>	<i>pɸo</i>	<i>pɸo</i>	<i>po</i>	H	<i>p^ho</i>
197	苑	山	元	影	<i>hekou</i>	3	<i>shang</i>	<i>ɮ^wiɤn</i>	<i>ɮ^wion</i>	<i>uən</i>	R	<i>wɰn</i>
198	囿	流	尤	云	<i>kaikou</i>	3	<i>qu</i>	<i>ɸiu</i>	<i>ɸəu</i>	<i>iu</i>	R	<i>ju</i>
199	林	深	侵	來	<i>kaikou</i>	3	<i>ping</i>	<i>lim</i>	<i>lim</i>	<i>lim</i>	L	<i>lim</i>
200	藪	流	侯	心	<i>kaikou</i>	1	<i>shang</i>	<i>su</i>	<i>su</i>	<i>su</i>	H	<i>su</i>
201	壟	通	鍾	來	<i>hekou</i>	3	<i>shang</i>	<i>liɸoŋ</i>	<i>liɸoŋ</i>	<i>loŋ</i>	R	<i>loŋ</i>
202	畝	山	元	非	<i>hekou</i>	3	<i>qu</i>	<i>p^wiɤn</i>	<i>p^wion</i>	<i>p^han</i>	H	<i>p^han</i>
203	畹	山	元	影	<i>hekou</i>	3	<i>shang</i>	<i>ɮ^wiɤn</i>	<i>ɮ^wion</i>	<i>oan</i>	R	<i>wɰn</i>
204	畛	臻	真	章	<i>kaikou</i>	3	<i>shang</i>	<i>tɛin</i>	<i>tɛin</i>	<i>tin</i> ³⁷⁶	R	<i>tɛin</i>
205	畦	蟹	齊	匣	<i>hekou</i>	4	<i>ping</i>	<i>ɸ^wei</i>	<i>ɸ^wei</i>	<i>kiu</i>	L	<i>kju</i>
206	疇	流	尤	澄	<i>kaikou</i>	3	<i>ping</i>	<i>ɕiəu</i>	<i>ɕiəu</i>	<i>tiu</i>	L	<i>tɛu</i>
207	畎	山	先	見	<i>hekou</i>	4	<i>shang</i>	<i>k^wen</i>	<i>k^wen</i>	<i>kiən</i>	R	<i>kjɰn</i>
208	畝	流	侯	明	<i>kaikou</i>	1	<i>shang</i>	<i>mu</i>	<i>mu</i>	<i>mo</i>	R	<i>mo</i>
209	苟	宕	藥	禪	<i>kaikou</i>	3	<i>ru</i>	<i>dziak</i>	<i>dziak</i>	<i>siak</i>	H	<i>tɛak</i>

³⁷⁶ Also [tsin] (L tone) (臻真章開 3 平[tɛin] [tɛin] [tɛin])

210	藥	宕	藥	以	<i>kaikou</i>	3	<i>ru</i>	jiak	jiak	iak	H	jak
211	蓄	宕	陽	從	<i>kaikou</i>	3	<i>ping</i>	dzian	dzian	tsian	L	tean
212	薇	止	微	微	<i>kaikou</i>	3	<i>ping</i>	mii	məi	mi	L	mi
213	葵	止	脂	群	<i>hekou</i>	3A	<i>ping</i>	g ^w i	g ^w i	kiu	L	kju
214	梅	蟹	灰	明	<i>kaikou</i>	1	<i>ping</i>	moi	moi	mɿ	L	mæ
215	躑	梗	昔	澄	<i>kaikou</i>	3	<i>ru</i>	ɟiek	ɟiek	tʰiək	H	te ^h ək
216	躑	通	燭	澄	<i>hekou</i>	3	<i>ru</i>	ɟiɯək	ɟiɯək	tʰiok	H	te ^h ok
217	蓮	山	先	來	<i>kaikou</i>	4	<i>ping</i>	len	len	liən	L	ljən
218	荷	果	歌	匣	<i>kaikou</i>	1	<i>ping</i>	ɦa	ɦa	ha	L	ha
219	芙	遇	虞	奉	<i>hekou</i>	3	<i>ping</i>	biɯo	biɯo	pu	L	pu
220	藻	遇	魚	群	<i>hekou</i>	3	<i>ping</i>	giɻ	gio	kə	L	kɿ
221	槿	臻	殷	見	<i>kaikou</i>	3	<i>shang</i>	kin	kiən	kin	R	kun
222	薜	臻	諄	書	<i>hekou</i>	3	<i>qu</i>	ɕ ^w in	ɕ ^w in	siun	R	sun
223	梔	止	支	章	<i>kaikou</i>	3	<i>ping</i>	teiɛ	teie	tsi	L	tei
224	菊	通	屋	見	<i>hekou</i>	3	<i>ru</i>	kiuk	kiuk	kuk	H	kuk
225	芝	止	之	章	<i>kaikou</i>	3	<i>ping</i>	tei	teə	tsi	L	tei
226	蘭	山	寒	來	<i>kaikou</i>	1	<i>ping</i>	lan	lan	lan	L	lan
227	篁	宕	唐	匣	<i>hekou</i>	1	<i>ping</i>	ɦ ^w aŋ	ɦ ^w aŋ	hoan	L	hwan
228	竹	通	屋	知	<i>hekou</i>	3	<i>ru</i>	ɟiuk	ɟiuk	tiuk	H	teuk
229	莞	山	桓	見	<i>hekou</i>	1	<i>ping</i>	k ^w an	k ^w an	koan	L	kwan

230	蓀	臻	魂	心	hekou	1	ping	sʊon	sʊon	son	L	son
231	菖	宕	陽	昌	kaikou	3	ping	tɕʰiaŋ	tɕʰiaŋ	tsʰiaŋ	L	tɕʰaŋ
232	蒲	遇	模	並	hekou	1	ping	bʊo	bʊo	pʰo	L	pʰo
233	蘆	山	刪	疑	hekou	2	qu	ŋ ^w æŋ	ŋ ^w aŋ	lan	R	lan
234	荻	梗	錫	定	kaikou	4	ru	dek	dek	tiək	H	tɕək
235	蒹	咸	添	見	kaikou	4	ping	kem	kem	kiəm	L	kjəm
236	萑	山	桓	匣	hekou	1	ping	fʰaŋ	fʰaŋ	hoan	L	hwan
237	莢	咸	談	透	kaikou	1	shang	tʰam	tʰam	tam	R	tam
238	葭	假	麻	見	kaikou	2	ping	k ^ʷ æ	k ^ʷ a	ka	L	ka
239	葦	止	微	云	hekou	3	shang	fʰi	fʰiəi	ui	R	y
240	蘆	遇	模	來	hekou	1	ping	lʊo	lʊo	lo	L	lo
241	蔦	遇	模	影	hekou	1	ping	ʔʊo	ʔʊo	o	L	o
242	藎	流	侯	影	kaikou	1	ping	ʔu	ʔu	ku	L	ku
243	芭	假	麻	幫	kaikou	2	ping	p ^ʷ æ	p ^ʷ a	pʰa	L	pʰa
244	蕉	效	宵	精	kaikou	3	ping	tsiɛu	tsieu	tsʰio	L	tɕʰo
245	菟	遇	模	透	hekou	1	qu	tʰʊo	tʰʊo	tʰo	R	tʰo
246	蓀	止	之	心	kaikou	3	ping	si	sə	sɿ	L	sa
247	瓠	遇	模	匣	hekou	1	ping	hʊo	hʊo	ho	L	ho
248	瓠	遇	模	來	hekou	1	ping	lʊo	lʊo	lo	L	lo
249	莓	蟹	灰	明	kaikou	1	ping	moi	moi	mɿ	L	mæ

250	苔	蟹	哈	定	<i>kaikou</i>	1	<i>ping</i>	dəi	dəi	tʰai	L	tʰæ
251	蕓	咸	覃	定	<i>kaikou</i>	1	<i>ping</i>	dəm	dəm	tam	L	tam
252	薺	山	仙	心	<i>kaikou</i>	3	<i>shang</i>	siɛn	sien	siən	R	sɔn
253	葎	臻	術	來	<i>hekou</i>	3	<i>ru</i>	lʷɪt	lʷit	liul	H	ljul
254	藁	止	之	心	<i>kaikou</i>	3	<i>shang</i>	si	sə	si	R	si
255	茺	山	桓	匣	<i>hekou</i>	1	<i>ping</i>	ɦʷan	ɦʷan	hoan	L	hwan
256	薺	蟹	齊	見	<i>kaikou</i>	4	<i>qu</i>	kei	kei	kiəi	H	kje
257	苧	遇	魚	澄	<i>hekou</i>	3	<i>shang</i>	d̪iɤ	d̪io	tiə	R	tɕɤ
258	麻	假	麻	明	<i>kaikou</i>	2	<i>ping</i>	mʷæ	mʷa	ma	L	ma
259	縹	梗	清	溪	<i>hekou</i>	3A	<i>shang</i>	kʰiɛŋ	kʰiɛŋ	kiəŋ	R	kjɤŋ
260	葛	山	曷	見	<i>kaikou</i>	1	<i>ru</i>	kan	kan	kal	H	kal
261	菰	山	末	見	<i>hekou</i>	1	<i>ru</i>	kʷan	kʷan	koal	H	kwal
262	蕓	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu
263	薺	梗	麥	幫	<i>kaikou</i>	2	<i>ru</i>	pʷɛk	pʷɛk	piək	H	pjɤk
264	荔	蟹	齊	來	<i>kaikou</i>	4	<i>qu</i>	lei	lei	liəi	L	lje
265	茺	通	東	昌	<i>hekou</i>	3	<i>ping</i>	tɕʰiuŋ	tɕʰiuŋ	tsʰiuŋ	L	tɕʰuŋ
266	蔚	臻	物	影	<i>hekou</i>	3	<i>ru</i>	ʔiun	ʔiun	ul	H	ul
267	萑	止	脂	章	<i>hekou</i>	3	<i>ping</i>	tɕʷi	tɕʷi	tsʰiu	L	tɕʰu
268	蕓	蟹	灰	透	<i>hekou</i>	1	<i>ping</i>	tʰwoi	tʰwoi	tʰoi	L	tʰø
269	繫	山	元	奉	<i>hekou</i>	3	<i>ping</i>	bʷiɤn	bʷiɤn	pən	L	pɤn

270	艾	蟹	泰	疑	<i>kaikou</i>	1	<i>qu</i>	ɲai	ɲai	ai	R	æ
271	蒿	效	豪	曉	<i>kaikou</i>	1	<i>ping</i>	hau	hau	ho	L	ho
273	菅	山	刪	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ æn	k ^ʷ an	koan	L	kwan
272	蓬	通	東	並	<i>hekou</i>	1	<i>ping</i>	buŋ	buŋ	poŋ	L	poŋ
274	茅	效	肴	明	<i>kaikou</i>	2	<i>ping</i>	m ^ʷ æu	m ^ʷ au	mo	L	mo
275	萸	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tɕe
276	蹄	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tɕe
277	蒨	山	先	清	<i>kaikou</i>	4	<i>qu</i>	ts ^h en	ts ^h en	ts ^h iən	R	tɕ ^h ʌn
278	萱	山	元	曉	<i>hekou</i>	3	<i>ping</i>	h ^w iɤn	h ^w ion	huən	L	hwʌn
279	藍	咸	談	來	<i>kaikou</i>	1	<i>ping</i>	lam	lam	nam	L	nam
280	葒	通	東	匣	<i>hekou</i>	1	<i>ping</i>	ɦuŋ	ɦuŋ	hoŋ	L	hoŋ
281	稂	宕	唐	來	<i>kaikou</i>	1	<i>ping</i>	laŋ	laŋ	laŋ	L	laŋ
282	莠	流	尤	以	<i>kaikou</i>	3	<i>shang</i>	jiu	jəu	iu	R	ju
283	稊	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tɕe
284	稗	蟹	佳	並	<i>kaikou</i>	2	<i>qu</i>	b ^ʷ ɛ	b ^ʷ e	p ^h ai	R	p ^h æ
285	藻	效	宵	並	<i>kaikou</i>	3A	<i>ping</i>	biɛu	bieu	p ^h io	L	p ^h jo
286	萍	梗	青	並	<i>kaikou</i>	4	<i>ping</i>	beŋ	beŋ	p ^h iəŋ	L	p ^h jʌŋ
287	藻	效	豪	精	<i>kaikou</i>	1	<i>shang</i>	tsau	tsau	tso	R	tɕo
288	蘋	臻	真	並	<i>kaikou</i>	3A	<i>ping</i>	bin	bin	piŋ	L	piŋ
289	梧	遇	模	疑	<i>hekou</i>	1	<i>ping</i>	ŋuo	ŋuo	io	H	o

290	桐	通	東	定	hekou	1	ping	duŋ	duŋ	toŋ	L	toŋ
291	楊	宕	陽	以	kaikou	3	ping	jian	jian	iaŋ	L	jaŋ
292	柳	流	尤	來	kaikou	3	shang	liu	ləu	liu	R	lju
293	檜	蟹	泰	見	kaikou	1	qu	kai	kai	hoi	R	hø
294	栢	梗	陌	幫	kaikou	2	ru	p ^ʷ æk	p ^ʷ ak	p ^ʷ ik	H	pæk
295	桂	蟹	齊	見	hekou	4	qu	k ^w ei	k ^w ei	kiəi	R	kje
296	椿	臻	諄	徹	hekou	3	ping	t ^h win	t ^h win	ts ^h iun	L	te ^h un
297	楓	通	東	非	hekou	3	ping	piuŋ	piuŋ	p ^h uŋ	L	p ^h uŋ
298	桑	宕	唐	心	kaikou	1	ping	saŋ	saŋ	saŋ	L	saŋ
299	麋	咸	鹽	影	kaikou	3A	shang	ʔiem	ʔiem	iəm	R	j ^ʌ m
300	柘	假	麻	章	kaikou	3	qu	tɕiæ	tɕia	tsia	R	tɕa
301	檉	梗	清	徹	kaikou	3	ping	t ^h iɛŋ	t ^h ieŋ	tiəŋ	L	tɕ ^ʌ ŋ
302	枳	止	支	見	kaikou	3A	ping	kiɛ	kie	ki	R	ki
303	荊	梗	庚	見	kaikou	3	ping	kiæŋ	kiaŋ	hiəŋ	L	h ^j ^ʌ ŋ
304	棘	曾	職	見	kaikou	3	ru	kik	kiək	kik	H	kuək
305	樗	遇	魚	徹	hekou	3	ping	t ^h iɤ	t ^h io	tiə	L	tɕ ^ʌ
306	漆	臻	質	清	kaikou	3	ru	ts ^h it	ts ^h it	ts ^h il	H	te ^h il
307	粉	臻	文	奉	hekou	3	ping	biun	biun	pun	L	pun
308	榆	遇	虞	以	hekou	3	ping	jiuɔ	jiuɔ	iu	L	ju
309	樺	假	麻	曉	hekou	2	qu	h ^w æ	h ^w a	hoa	R	hwa

310	假	假	麻	見	<i>kaikou</i>	2	<i>shang</i>	k ^y æ	k ^y a	ka	R	ka
311	槐	蟹	灰	匣	<i>hekou</i>	1	<i>ping</i>	h ^w oi	h ^w oi	koi	L	kø
312	藥	山	薛	疑	<i>kaikou</i>	3B	<i>ru</i>	ŋ ^y iɛt	ŋ ^y iet	piək	H	pjɿk, ɿl
313	楮	遇	魚	徹	<i>hekou</i>	3	<i>shang</i>	t ^h iɣ	t ^h io	tiə	R	tɛɿ
314	構	流	侯	見	<i>kaikou</i>	1	<i>qu</i>	ku	ku	ku	R	ku
315	榷	止	微	非	<i>kaikou</i>	3	<i>shang</i>	pɿi	pəi	pi	R	pi
316	榷	山	刪	匣	<i>hekou</i>	2	<i>qu</i>	h ^w æn	h ^w an	hoan	R	hwan
317	榷	通	屋	匣	<i>hekou</i>	1	<i>ru</i>	ɦuk	ɦuk	kok	H	kok
318	栩	遇	虞	云	<i>hekou</i>	3	<i>shang</i>	ɦ ^w iɤ	ɦ ^w iɤo	u	R	hɿ
319	柞	宕	鐸	從	<i>kaikou</i>	1	<i>ru</i>	dzak	dzak	tsak	H	tɛak
320	櫟	梗	錫	來	<i>kaikou</i>	4	<i>ru</i>	lek	lek	lik	H	ljɿk
321	櫟	遇	模	心	<i>hekou</i>	1	<i>ping</i>	sɤo	sɤo	so	L	so
322	松	通	鍾	邪	<i>hekou</i>	3	<i>ping</i>	ziɤŋ	ziɤŋ	sioŋ	L	soŋ
323	籐	曾	登	定	<i>kaikou</i>	1	<i>ping</i>	dəŋ	dəŋ	tiŋ	L	tuŋ
324	栲	深	侵	崇	<i>kaikou</i>	3	<i>ping</i>	dzim	dzim	tsɿm	L	team
325	櫟	通	屋	影	<i>hekou</i>	3	<i>ru</i>	ʔiuk	ʔiuk	uk	L	uk
326	槭	止	脂	日	<i>kaikou</i>	3	<i>qu</i>	ɿ	ɿ	zi	R	i
327	梓	止	之	精	<i>kaikou</i>	3	<i>shang</i>	tsi	tsə	tsɿ	R	tɛæ
328	楸	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iu	ts ^h iəu	ts ^h iu	L	tɛ ^h u
329	李	止	之	來	<i>kaikou</i>	3	<i>shang</i>	li	lə	ni	R	ni

330	奈	蟹	泰	泥	<i>kaikou</i>	1	<i>qu</i>	nai	nai	nai	R	næ
331	桃	效	豪	定	<i>kaikou</i>	1	<i>ping</i>	dau	dau	to	L	to
332	浬	流	侯	明	<i>kaikou</i>	1	<i>qu</i>	mu	mu	mu	R	mu
333	梨	止	脂	來	<i>kaikou</i>	3	<i>ping</i>	li	li	li	L	li
334	栗	臻	質	來	<i>kaikou</i>	3	<i>ru</i>	lit	lit	liul	H	ljul
335	檣	深	侵	群	<i>kaikou</i>	3B	<i>ping</i>	g ^y im	g ^y im	kim	L	kum
336	榴	流	尤	來	<i>kaikou</i>	3	<i>ping</i>	liu	ləu	liu	L	lju
337	榛	臻	臻	莊	<i>kaikou</i>	3	<i>ping</i>	tʂin	tʂin	tsin	L	tɕin
338	棗	效	豪	精	<i>kaikou</i>	1	<i>shang</i>	tsau	tsau	tso	R	tɕo
339	櫻	梗	耕	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^y ɛŋ	ʔ ^y ɛŋ	ʌiŋ	L	æŋ
340	杏	梗	庚	匣	<i>kaikou</i>	2	<i>shang</i>	ɦ ^y æŋ	ɦ ^y aŋ	hʌiŋ	R	hæŋ
341	芋	遇	魚	邪	<i>hekou</i>	3	<i>shang</i>	ziɤ	zio	siə	R	sʌ
342	橡	宕	陽	邪	<i>kaikou</i>	3	<i>shang</i>	ziaŋ	ziaŋ	siaŋ	H	saŋ
343	桷	止	之	日	<i>kaikou</i>	3	<i>ping</i>	ɳi	ɳə	zi	L	i
344	楮	流	尤	群	<i>kaikou</i>	3	<i>ping</i>	giu	gəu	ku	L	ku
345	楨	梗	青	明	<i>kaikou</i>	4	<i>ping</i>	meŋ	meŋ	miəŋ	L	mjʌŋ
346	櫨	假	麻	莊	<i>kaikou</i>	2	<i>ping</i>	tʂ ^y æ	tʂ ^y a	tsia	R	ɕa
347	棠	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
348	棣	蟹	齊	定	<i>kaikou</i>	4	<i>qu</i>	dei	dei	tʰiəi	R	tɕ ^h e
349	柑	咸	談	見	<i>kaikou</i>	1	<i>ping</i>	kam	kam	kam	L	kam

350	柚	流	尤	以	<i>kaikou</i>	3	<i>qu</i>	jɿu	jəu	iu	R	ju
351	橘	臻	術	見	<i>hekou</i>	3	<i>ru</i>	k ^w ɪt	k ^w ɪt	kiul	H	kjul
352	橙	曾	登	端	<i>kaikou</i>	1	<i>qu</i>	təŋ	təŋ	tɪŋ	L	tuŋ
353	椒	效	宵	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛu	tsieu	ts ^h io	L	tɛ ^h o
354	楔	山	仙	日	<i>hekou</i>	3	<i>shang</i>	ŋ ^w iɛn	ŋ ^w ien	ziən	R	jʌn
355	栲	梗	清	以	<i>kaikou</i>	3	<i>shang</i>	jiɛŋ	jieŋ	piŋ	R	jʌŋ
356	柿	止	之	崇	<i>kaikou</i>	3	<i>shang</i>	dzɿ	dzə	si	R	si
357	芡	咸	鹽	群	<i>kaikou</i>	3B	<i>shang</i>	g ^y iɛm	g ^y iem	kam	R	kam
358	蓂	梗	昔	以	<i>hekou</i>	3	<i>ru</i>	j ^w iɛk	j ^w iek	iək	H	jʌk
359	芰	止	支	群	<i>kaikou</i>	3B	<i>qu</i>	g ^y iɛ	g ^y ie	ki	R	ki
360	菱	曾	蒸	來	<i>kaikou</i>	3	<i>ping</i>	liŋ	liəŋ	liŋ	L	luŋ
361	葡	遇	模	並	<i>hekou</i>	1	<i>ping</i>	bɯo	bɯo	p ^h o	L	p ^h o
362	萄	效	豪	定	<i>kaikou</i>	1	<i>ping</i>	dau	dau	to	L	to
363	櫨	臻	真	並	<i>kaikou</i>	3A	<i>ping</i>	bin	bin	pin	L	pin
364	櫨	果	戈	並	<i>hekou</i>	1	<i>ping</i>	b ^w a	b ^w a	p ^h a	L	p ^h a
365	莓	蟹	灰	明	<i>kaikou</i>	1	<i>qu</i>	moi	moi	mɿi	L	mæ
366	蓍	深	侵	船	<i>kaikou</i>	3	<i>shang</i>	zim	zim	sim	R	sim
367	柑	咸	鹽	日	<i>kaikou</i>	3	<i>ping</i>	ŋiɛm	ŋiem	ziəm	L	jʌm
368	茛	梗	錫	端	<i>kaikou</i>	4	<i>ru</i>	tek	tek	tiək	H	tɛʌk
369	藜	蟹	哈	來	<i>kaikou</i>	1	<i>ping</i>	lɿi	lɿi	lɿi	L	læ

370	弊	流	尤	明	<i>kaikou</i>	3	<i>ping</i>	miu	məu	mo	L	mo
371	蕎	效	宵	群	<i>kaikou</i>	3B	<i>ping</i>	g ^y ieu	g ^y ieu	kio	L	kjo
372	麥	梗	麥	明	<i>kaikou</i>	2	<i>ru</i>	m ^y ek	m ^y ek	mɿik	H	mæk
373	縻	止	支	明	<i>kaikou</i>	3B	<i>ping</i>	m ^y ie	m ^y ie	mi	L	mi
374	縻	蟹	祭	精	<i>kaikou</i>	3	<i>qu</i>	tsiei	tsiei	tsiəi	R	tɛe
375	黍	遇	魚	書	<i>hekou</i>	3	<i>shang</i>	ɕiɤ	ɕio	siə	R	sɿ
376	稷	曾	職	精	<i>kaikou</i>	3	<i>ru</i>	tsik	tsiək	tsik	H	tɛik
377	粳	梗	庚	見	<i>kaikou</i>	2	<i>ping</i>	k ^y æŋ	k ^y əŋ	kiəŋ	L	kjɿŋ
378	糯	果	戈	泥	<i>hekou</i>	1	<i>qu</i>	n ^w a	n ^w a	na	R	na
379	秬	山	仙	心	<i>kaikou</i>	3	<i>ping</i>	siɛn	sien	siən	L	sɿn
380	秫	臻	術	船	<i>hekou</i>	3	<i>ru</i>	z ^w it	z ^w it	t ^h iul	H	tɕ ^h ul
381	稻	效	豪	定	<i>kaikou</i>	1	<i>shang</i>	dau	dau	to	H	to
382	梁	宕	陽	來	<i>kaikou</i>	3	<i>ping</i>	liəŋ	liəŋ	liəŋ	L	ljəŋ
383	穉	蟹	佳	並	<i>kaikou</i>	2	<i>qu</i>	b ^y ɛ	b ^y e	p ^h ai	R	p ^h æ
384	粟	通	燭	心	<i>hekou</i>	3	<i>ru</i>	siuok	siuok	sok	H	sok
385	薏	止	之	影	<i>kaikou</i>	3	<i>qu</i>	ʔi	ʔə	ii	R	ui
386	苡	止	之	以	<i>kaikou</i>	3	<i>shang</i>	ji	jə	i	R	i
387	荏	深	侵	日	<i>kaikou</i>	3	<i>shang</i>	ɳim	ɳim	zim	R	im
388	菰	山	先	幫	<i>kaikou</i>	4	<i>shang</i>	pen	pen	piən	L	pjɿn
389	豌	山	桓	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w an	ʔ ^w an	oan	L	wan

390	𣵀	江	江	見	<i>kaikou</i>	2	<i>ping</i>	kəŋ	koŋ	kaŋ	L	kaŋ
391	荳	流	侯	定	<i>kaikou</i>	1	<i>qu</i>	du	du	tu	H	tu
392	菽	通	屋	書	<i>hekou</i>	3	<i>ru</i>	ɕiuk	ɕiuk	siuk	H	suk
393	茄	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ æ	k ^ʷ a	ka	L	ka
394	茈	假	麻	見	<i>hekou</i>	2	<i>ping</i>	k ^w æ	k ^w a	koa	L	kwa
395	葱	通	東	清	<i>hekou</i>	1	<i>ping</i>	ts ^h uŋ	ts ^h uŋ	ts ^h oŋ	L	te ^h oŋ
396	蒜	山	桓	心	<i>hekou</i>	1	<i>qu</i>	s ^w an	s ^w an	suən	H	swan
397	韭	流	尤	見	<i>kaikou</i>	3	<i>shang</i>	kiu	kəu	ku	R	ku
398	薤	蟹	皆	匣	<i>kaikou</i>	2	<i>qu</i>	ɦ ^ʷ ei	ɦ ^ʷ ei	hiəi	R	hje
399	藪	深	緝	莊	<i>kaikou</i>	3	<i>ru</i>	tɕip	tɕip	tsip	H	teup
400	筍	臻	諄	心	<i>hekou</i>	3	<i>shang</i>	s ^w in	s ^w in	siun	R	sun
401	蔘	深	侵	生	<i>kaikou</i>	3	<i>ping</i>	ɕim	ɕim	sam	L	sam
402	茱	臻	術	澄	<i>hekou</i>	3	<i>ru</i>	ɖ ^w it	ɖ ^w it	t ^h iul	L	te ^h ul
403	藜	蟹	齊	來	<i>kaikou</i>	4	<i>ping</i>	lei	lei	liəi	L	lje
404	莧	山	先	匣	<i>kaikou</i>	4	<i>qu</i>	ɦien	ɦien	hiən	R	hjan
405	蕒	山	仙	日	<i>hekou</i>	3	<i>shang</i>	ɳ ^w iɛn	ɳ ^w iɛn	ziən	R	jɛn
406	枳	止	之	日	<i>kaikou</i>	3	<i>shang</i>	ɳi	ɳə	zi	R	i
407	藎	深	侵	從	<i>kaikou</i>	3	<i>shang</i>	dzim	dzim	sim	R	sim
408	菌	臻	諄	群	<i>hekou</i>	3B	<i>shang</i>	g ^w iɛn	g ^w iɛn	kiun	L	kjun
409	苦	山	屑	見	<i>kaikou</i>	4	<i>ru</i>	ket	ket	kil	H	kil

410	萸	梗	庚	見	<i>kaikou</i>	2	<i>shang</i>	k ^y æŋ	k ^y aŋ	kiəŋ	L	kjʌŋ
411	芫	山	元	疑	<i>hekou</i>	3	<i>ping</i>	ŋ ^w iɤn	ŋ ^w ion	uən	L	wʌn
412	芡	止	脂	心	<i>hekou</i>	3	<i>ping</i>	s ^w i	s ^w i	siu	L	su
413	匏	效	肴	並	<i>kaikou</i>	2	<i>ping</i>	b ^y æu	b ^y au	p ^h o	L	p ^h o
414	蓼	效	蕭	來	<i>kaikou</i>	4	<i>shang</i>	leu	leu	lio	R	ljɔ
415	茴	蟹	灰	匣	<i>hekou</i>	1	<i>ping</i>	fi ^w oi	fi ^w oi	hoi	L	hø
416	芹	臻	殷	群	<i>kaikou</i>	3	<i>ping</i>	gin	giən	kin	L	kun
417	蘿	果	歌	來	<i>kaikou</i>	1	<i>ping</i>	la	la	la	L	la
418	蔔	曾	德	並	<i>kaikou</i>	1	<i>ru</i>	bək	bək	pok	H	pok
419	蔓	山	桓	明	<i>hekou</i>	1	<i>ping</i>	m ^w an	m ^w an	man	L	man
420	菁	梗	清	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛŋ	tsieŋ	ts ^h iəŋ	L	te ^h ʌŋ
421	菰	通	東	心	<i>hekou</i>	3	<i>ping</i>	siuŋ	siuŋ	sioŋ	L	soŋ
422	薺	蟹	齊	從	<i>kaikou</i>	4	<i>shang</i>	dzei	dzei	tsiəi	R	tɕe
423	芋	遇	虞	云	<i>hekou</i>	3	<i>qu</i>	fiɣɔ	fiɣo	u	R	u
424	蓴	臻	諄	禪	<i>hekou</i>	3	<i>ping</i>	dz ^w m	dz ^w in	siun	L	sun
425	苜	通	屋	明	<i>hekou</i>	3	<i>ru</i>	miuk	miuk	mok	H	mok
426	蓎	通	屋	心	<i>hekou</i>	3	<i>ru</i>	siuk	siuk	siuk	H	suk
427	薯	遇	魚	禪	<i>hekou</i>	3	<i>qu</i>	dziɤ	dzio	siə	H	sʌ
428	蘋	遇	魚	以	<i>hekou</i>	3	<i>qu</i>	jiɤ	jio	iə	R	jʌ
429	芥	蟹	皆	見	<i>kaikou</i>	2	<i>qu</i>	k ^y ei	k ^y ei	kai	R	kæ

430	薑	宕	陽	見	<i>kaikou</i>	3	<i>ping</i>	kiaŋ	kiaŋ	kaŋ	L	kaŋ
431	磨	果	戈	明	<i>hekou</i>	1	<i>ping</i>	m ^w a	m ^w a	ma	L	ma
432	菇	遇	模	見	<i>hekou</i>	1	<i>ping</i>	kɿo	kɿo	ko	L	ko
433	囊	宕	陽	日	<i>kaikou</i>	3	<i>ping</i>	ŋiaŋ	ŋiaŋ	iaŋ	L	jaŋ
434	茛	宕	唐	幫	<i>kaikou</i>	1	<i>shang</i>	paŋ	paŋ	paŋ	R	paŋ
435	蒿	果	戈	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w a	ʔ ^w a	oa	L	wa
436	苣	遇	魚	群	<i>hekou</i>	3	<i>shang</i>	giɿ	gio	kə	R	kʌ
437	蕨	山	月	見	<i>hekou</i>	3	<i>ru</i>	k ^w iɿt	k ^w iot	kuəl	H	kwʌl
438	鼈	山	薛	幫	<i>kaikou</i>	3A	<i>ru</i>	piɛt	piet	piəl	H	pjʌl
439	藕	流	侯	疑	<i>kaikou</i>	1	<i>shang</i>	ŋu	ŋu	u	R	u
440	蘇	遇	模	心	<i>hekou</i>	1	<i>ping</i>	sɿo	sɿo	so	L	so
441	菠	果	戈	幫	<i>hekou</i>	1	<i>ping</i>	p ^w a	p ^w a	p ^h a	L	p ^h a
442	陵	曾	蒸	來	<i>kaikou</i>	3	<i>ping</i>	liŋ	liəŋ	liŋ	L	luŋ
443	蓀	臻	文	見	<i>hekou</i>	3	<i>ping</i>	kiun	kiun	kun	L	kun
444	蓬	山	曷	定	<i>kaikou</i>	1	<i>ru</i>	dan	dan	tal	H	tal
445	蓼	遇	魚	群	<i>hekou</i>	3	<i>shang</i>	giɿ	gio	kə	R	kʌ
446	賁	蟹	佳	明	<i>kaikou</i>	2	<i>shang</i>	m ^ɥ ɛ	m ^ɥ e	mʌi	L	mæ
447	葶	臻	沒	並	<i>hekou</i>	1	<i>ru</i>	bɿot	bɿot	pʌl	H	pal
448	壘	蟹	齊	精	<i>kaikou</i>	4	<i>ping</i>	tsei	tsei	tsiəi	L	tsee
449	蓼	果	戈	並	<i>hekou</i>	1	<i>qu</i>	b ^w a	b ^w a	p ^h a	R	p ^h a

450	蒹	果	歌	疑	<i>kaikou</i>	1	<i>qu</i>	ŋa	ŋa	ha	R	ha
451	芩	流	尤	奉	<i>kaikou</i>	3	<i>ping</i>	biu	biəu	pu	L	pu
452	苕	止	之	以	<i>kaikou</i>	3	<i>shang</i>	ji	jə	i	R	i
453	萸	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu
454	葵	止	脂	群	<i>hekou</i>	3A	<i>ping</i>	g ^w i	g ^w i	kiu	L	kju
455	茱	流	尤	日	<i>kaikou</i>	3	<i>ping</i>	ŋiu	ŋəu	ziu	L	ju
456	萵	蟹	齊	幫	<i>kaikou</i>	4	<i>ping</i>	pei	pei	pi	L	pi
457	鳳	通	東	奉	<i>hekou</i>	3	<i>qu</i>	biuŋ	biuŋ	poŋ	R	poŋ
458	凰	宕	唐	匣	<i>hekou</i>	1	<i>ping</i>	h ^w aŋ	h ^w aŋ	hoan	L	hwan
459	鸞	山	桓	來	<i>hekou</i>	1	<i>ping</i>	l ^w an	l ^w an	lan	L	lan
460	鶴	宕	鐸	匣	<i>kaikou</i>	1	<i>ru</i>	hak	hak	hak	H	hak
461	鴻	通	東	匣	<i>hekou</i>	1	<i>ping</i>	huŋ	huŋ	hoŋ	L	hoŋ
462	鴈	山	刪	疑	<i>kaikou</i>	2	<i>qu</i>	ŋ ^y æn	ŋ ^y an	an	R	an
463	鵠	流	尤	非	<i>kaikou</i>	3	<i>shang</i>	piu	pəu	pu	R	pu
464	鵠	通	沃	匣	<i>hekou</i>	1	<i>ru</i>	h ^y ok	h ^y ok	kok	H	kok
465	鴈	通	東	心	<i>hekou</i>	3	<i>ping</i>	siuŋ	siuŋ	sioŋ	L	soŋ
466	鵠	臻	沒	見	<i>hekou</i>	1	<i>ru</i>	k ^y ot	k ^y ot	kol	H	kol
467	鷹	曾	蒸	影	<i>kaikou</i>	3	<i>ping</i>	ʔiŋ	ʔiəŋ	iŋ	H	uŋ
468	隼	臻	諄	心	<i>hekou</i>	3	<i>shang</i>	s ^w in	s ^w in	tsiun	R	tejun
469	鵠	流	尤	曉	<i>kaikou</i>	3	<i>ping</i>	hiu	həu	hiu	L	hju

470	鷓鴣	流	尤	來	<i>kaikou</i>	3	<i>ping</i>	liu	ləu	liu	L	lju
471	鴉	效	宵	云	<i>kaikou</i>	3B	<i>ping</i>	h ^ɿ ieu	h ^ɿ ieu	hio	L	hjo
472	鵬	通	屋	奉	<i>hekou</i>	3	<i>ru</i>	biuk	biuk	pok	H	pok
473	雕	效	蕭	端	<i>kaikou</i>	4	<i>ping</i>	teu	teu	tio	L	tɛo
474	鷺	流	尤	從	<i>kaikou</i>	3	<i>qu</i>	dziu	dzəu	ts ^h iu	R	tɛ ^h u
475	鶴	山	桓	見	<i>hekou</i>	1	<i>qu</i>	k ^w an	k ^w an	koan	H	kwan
476	鵠	通	屋	明	<i>hekou</i>	3	<i>ru</i>	miuk	miuk	mok	H	mok
477	鵠	通	鍾	書	<i>hekou</i>	3	<i>ping</i>	ɕiɯŋ	ɕiɯŋ	tsoaŋ	L	tɛwaŋ
478	鷓鴣	臻	術	以	<i>hekou</i>	3	<i>ru</i>	j ^w it	j ^w it	hiul	H	hjul
479	鵠	通	屋	透	<i>hekou</i>	1	<i>ru</i>	t ^h uk	t ^h uk	tok	H	tok
480	鷺	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iu	ts ^h iəu	ts ^h iu	L	tɛ ^h u
481	鷓鴣	通	鍾	影	<i>hekou</i>	3	<i>ping</i>	ʔiɯŋ	ʔiɯŋ	oŋ	L	oŋ
482	鵠	遇	魚	群	<i>hekou</i>	3	<i>ping</i>	giɣ	gio	kə	L	kʌ
483	鷓鴣	梗	昔	精	<i>kaikou</i>	3	<i>ru</i>	tsiek	tsiek	ts ^h iək	H	tɛ ^h ʌk
484	鵠	梗	青	來	<i>kaikou</i>	4	<i>ping</i>	leŋ	leŋ	liəŋ	L	ljʌŋ
485	鵠	臻	沒	並	<i>hekou</i>	1	<i>ru</i>	bɯot	bɯot	pʌl	L	pal
486	鵠	咸	合	見	<i>kaikou</i>	1	<i>ru</i>	kəp	kəp	hap	H	hap
487	鴛鴦	山	薛	來	<i>kaikou</i>	3	<i>ru</i>	liɛt	liɛt	liəl	H	ljʌl
488	鳩	流	尤	見	<i>kaikou</i>	3	<i>ping</i>	kiu	kəu	ku	H	ku
489	鷓鴣	效	宵	以	<i>kaikou</i>	3	<i>qu</i>	jiɛu	jieu	io	R	jo

490	鷓	山	仙	章	<i>kaikou</i>	3	<i>ping</i>	teien	teien	tsiən	L	teʌn
491	鷓	臻	真	禪	<i>kaikou</i>	3	<i>ping</i>	dzin	dzin	sin	L	sin
492	鷓	通	東	非	<i>hekou</i>	3	<i>ping</i>	piuŋ	piuŋ	p ^h uŋ	L	p ^h uŋ
493	鷓	止	之	從	<i>kaikou</i>	3	<i>ping</i>	dzi	dzə	tsʌ	L	tea
494	鷓	效	豪	來	<i>kaikou</i>	1	<i>shang</i>	lau	lau	lo	R	lo
495	鷓	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tce
496	鷓	遇	模	匣	<i>hekou</i>	1	<i>ping</i>	fɿo	fɿo	ho	L	ho
497	鷓	蟹	齊	見	<i>kaikou</i>	4	<i>ping</i>	kei	kei	kiəi	L	kje
498	雉	止	脂	澄	<i>kaikou</i>	3	<i>shang</i>	ɕi	ɕi	t ^h i	R	tɛ ^h i
499	鷓	果	歌	疑	<i>kaikou</i>	1	<i>ping</i>	ŋa	ŋa	a	L	a
500	鴨	咸	狎	影	<i>kaikou</i>	2	<i>ru</i>	ʔ ^v æp	ʔ ^v ap	ap	H	ap
501	鷓	遇	魚	清	<i>hekou</i>	3	<i>ping</i>	ts ^h iɿ	ts ^h io	tsiə	L	teʌ
502	鷓	流	侯	影	<i>kaikou</i>	1	<i>ping</i>	ʔu	ʔu	ku	L	ku
503	鷓	遇	魚	書	<i>hekou</i>	3	<i>ping</i>	ɕiɿ	ɕio	siə	L	sʌ
504	鳧	遇	虞	奉	<i>hekou</i>	3	<i>ping</i>	biɿo	biɿo	pu	L	pu
505	鷓	效	宵	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛu	tsieu	ts ^h io	H	tɛ ^h o
506	鷓	效	蕭	來	<i>kaikou</i>	4	<i>ping</i>	leu	leu	lio	L	ljo
507	鷓	宕	唐	清	<i>kaikou</i>	1	<i>ping</i>	ts ^h aŋ	ts ^h aŋ	ts ^h aŋ	L	tɛ ^h aŋ
508	鷓	梗	庚	見	<i>kaikou</i>	2	<i>ping</i>	k ^v æŋ	k ^v aŋ	kiəŋ	L	kjʌŋ
509	烏	遇	模	影	<i>hekou</i>	1	<i>ping</i>	ʔɿo	ʔɿo	o	L	o

510	鴉	假	麻	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^v æ	ʔ ^v a	a	L	a
511	鸞	遇	魚	以	<i>hekou</i>	3	<i>ping</i>	jiɿ	jio	iə	L	jʌ
512	鵲	止	支	心	<i>kaikou</i>	3	<i>ping</i>	siɛ	sie	sʌ	L	sa
513	佳	止	脂	章	<i>hekou</i>	3	<i>ping</i>	tɕ ^w i	tɕ ^w i	ts ^h io	L	tɕ ^h u
514	雀	宕	藥	精	<i>kaikou</i>	3	<i>ru</i>	tsiak	tsiak	tsiak	H	teak
515	梟	效	蕭	見	<i>kaikou</i>	4	<i>ping</i>	keu	keu	hio	L	hjo
516	鷓鴣	梗	錫	疑	<i>kaikou</i>	4	<i>ru</i>	ɲek	ɲek	ʌik	H	æk
517	鸞	山	先	影	<i>kaikou</i>	4	<i>qu</i>	ʔen	ʔen	iən	R	jʌn
518	駝	臻	質	影	<i>kaikou</i>	3B	<i>ru</i>	ʔ ^v it	ʔ ^v it	il	H	uɪ
519	鶯	梗	耕	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^v ɛŋ	ʔ ^v ɛŋ	ʌiŋ	L	æŋ
520	鸚鵡	蟹	齊	來	<i>kaikou</i>	4	<i>ping</i>	lei	lei	liəi	L	lje
521	鴉	止	脂	書	<i>kaikou</i>	3	<i>ping</i>	ɕi	ɕi	si	L	si
522	鵲	止	支	見	<i>hekou</i>	3B	<i>shang</i>	k ^w ɿɛ	k ^w ɿɛ	kuəi	R	kwe
523	鵲	山	黠	見	<i>kaikou</i>	2	<i>ru</i>	k ^v ɛt	k ^v ɛt	al	H	al
524	鵲	通	屋	見	<i>hekou</i>	3	<i>ru</i>	kiuk	kiuk	kuk	H	kuk
525	鵲	咸	覃	影	<i>kaikou</i>	1	<i>ping</i>	ʔəm	ʔəm	am	L	am
526	鶯	臻	諄	禪	<i>hekou</i>	3	<i>ping</i>	dz ^w in	dz ^w in	siun	L	sun
527	鸞	山	仙	以	<i>hekou</i>	3	<i>ping</i>	j ^w iɛn	j ^w iɛn	iən	L	jʌn
528	鴉	止	脂	昌	<i>kaikou</i>	3	<i>ping</i>	tɕ ^h i	tɕ ^h i	ts ^h i	L	tɕ ^h i
529	鵲	宕	藥	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h iak	ts ^h iak	tsiak	H	teak

530	鸞	江	覺	匣	<i>kaikou</i>	2	<i>ru</i>	fi̯ɔk	fi̯ok	hak	H	hak
531	雉	止	支	見	<i>hekou</i>	3A	<i>ping</i>	k ^{wi} ɛ	k ^{wi} ɛ	kiu	L	kju
532	鵲	山	先	見	<i>kaikou</i>	4	<i>ping</i>	ken	ken	kiən	L	kjɛn
533	鵲	蟹	齊	溪	<i>kaikou</i>	4	<i>ping</i>	k ^{hei}	k ^{hei}	kiəi	L	kje
534	鵲	曾	職	徹	<i>kaikou</i>	3	<i>ru</i>	t ^{hi} k	t ^{hi} ək	t ^{hi} k	H	tɛ ^{hi} k
535	鸞	遇	模	來	<i>hekou</i>	1	<i>qu</i>	lɤo	lɤo	lo	R	lo
536	鸞	止	之	心	<i>kaikou</i>	3	<i>ping</i>	si	sə	sɛ	L	sa
537	鸞	止	微	奉	<i>kaikou</i>	3	<i>qu</i>	bii	biəi	pi	R	pi
538	翠	止	脂	清	<i>hekou</i>	3	<i>qu</i>	ts ^{hw} i	ts ^{hw} i	ts ^{hui}	R	tɛ ^{hy}
539	鸞	梗	耕	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^{ve} ɛŋ	ʔ ^{ve} ɛŋ	ɛŋ	L	æŋ
540	鵲	遇	虞	微	<i>hekou</i>	3	<i>shang</i>	miɤo	miɤo	mu	R	mu
541	鴛	山	元	影	<i>hekou</i>	3	<i>ping</i>	ʔ ^{wi} ɛn	ʔ ^{wi} ɛn	uən	L	wɛn
542	鸞	宕	陽	影	<i>kaikou</i>	3	<i>ping</i>	ʔiaŋ	ʔiaŋ	aŋ	L	aŋ
543	鸞	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lɤo	lɤo	lo	L	lo
544	鸞	止	之	從	<i>kaikou</i>	3	<i>ping</i>	dzi	dzə	tsɛ	L	tɛa
545	麒麟	止	之	群	<i>kaikou</i>	3	<i>ping</i>	gi	gə	kii	L	ki
546	麟	臻	真	來	<i>kaikou</i>	3	<i>ping</i>	lin	lin	lin	L	lin
547	虎	遇	模	曉	<i>hekou</i>	1	<i>shang</i>	hɤo	hɤo	ho	R	ho
548	豹	效	肴	幫	<i>kaikou</i>	2	<i>qu</i>	p ^{ve} æu	p ^{ve} au	p ^{hi} o	H	p ^{hi} o
549	象	宕	陽	邪	<i>kaikou</i>	3	<i>shang</i>	ziaŋ	ziaŋ	siaŋ	H	saŋ

550	獅	止	脂	生	<i>kaikou</i>	3	<i>ping</i>	ʃi	ʃi	sʌ	L	sa
551	狻	山	桓	心	<i>hekou</i>	1	<i>ping</i>	s ^w an	s ^w an	san	L	san
552	猊	蟹	齊	疑	<i>kaikou</i>	4	<i>ping</i>	ŋei	ŋei	iəi	L	je
553	獐	宕	陽	章	<i>kaikou</i>	3	<i>ping</i>	tɕiaŋ	tɕiaŋ	tsiaŋ	L	teaŋ
554	麝	臻	諄	見	<i>hekou</i>	3B	<i>ping</i>	k ^w ʲin	k ^w ʲin	kiun	L	kjun
555	麇	效	肴	並	<i>kaikou</i>	2	<i>ping</i>	b ^ʷ æu	b ^ʷ au	p ^h o	L	p ^h o
556	麝	假	麻	船	<i>kaikou</i>	3	<i>qu</i>	ziæ	zia	sia	R	sa
557	麋	止	脂	明	<i>kaikou</i>	3B	<i>ping</i>	m ^ʷ i	m ^ʷ i	mi	L	mi
558	鹿	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	lok	H	lok
559	麀	流	尤	影	<i>kaikou</i>	3	<i>ping</i>	ʔu	ʔu	u	L	u
560	麝	止	支	明	<i>kaikou</i>	3A	<i>ping</i>	miɛ	mie	mi	L	mi
561	豺	蟹	皆	崇	<i>kaikou</i>	2	<i>ping</i>	dz ^ʷ ɕi	dz ^ʷ ɕi	sii	L	si
562	狼	宕	唐	來	<i>kaikou</i>	1	<i>ping</i>	laŋ	laŋ	laŋ	L	laŋ
563	獐	臻	真	並	<i>kaikou</i>	3A	<i>ping</i>	bin	bin	pin	L	pin
564	獺	山	曷	透	<i>kaikou</i>	1	<i>ru</i>	t ^h an	t ^h an	tal	H	tal
565	獬	止	支	明	<i>kaikou</i>	3A	<i>ping</i>	miɛ	mie	mi	L	mi
566	猴	流	侯	匣	<i>kaikou</i>	1	<i>ping</i>	ɦu	ɦu	hu	L	hu
567	猢	遇	模	匣	<i>hekou</i>	1	<i>ping</i>	ɦuɔ	ɦuɔ	ho	L	ho
568	猻	臻	魂	心	<i>hekou</i>	1	<i>ping</i>	sɯon	sɯon	son	L	son
569	犀	蟹	齊	心	<i>kaikou</i>	4	<i>ping</i>	sei	sei	siə	L	sʌ

570	貂	效	蕭	端	<i>kaikou</i>	4	<i>ping</i>	teu	teu	t ^h io	L	tɛ ^h o
571	豨	止	微	曉	<i>kaikou</i>	3	<i>ping</i>	hii	həi	hii	L	huɪ
572	貓	效	宵	明	<i>kaikou</i>	3B	<i>ping</i>	m ^y iɛu	m ^y ieu	mio	L	mjo
573	駒	遇	虞	見	<i>hekou</i>	3	<i>ping</i>	kiɤʊ	kiɤo	ku	L	ku
574	犢	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	H	tok
575	猩	梗	庚	生	<i>kaikou</i>	2	<i>ping</i>	ʂ ^v æŋ	ʂ ^v aŋ	siəŋ	L	sʌŋ
576	猿	山	元	云	<i>hekou</i>	3	<i>ping</i>	ɦ ^w iɤn	ɦ ^w ion	uən	L	wʌn
577	粘	遇	模	見	<i>hekou</i>	1	<i>shang</i>	kɤʊ	kɤo	ko	R	ko
578	羴	梗	錫	來	<i>kaikou</i>	4	<i>ru</i>	lek	lek	liək	H	ljʌk
579	羊	宕	陽	以	<i>kaikou</i>	3	<i>ping</i>	jiaŋ	jian	iaŋ	L	jaŋ
580	羔	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	kau	kau	ko	L	ko
581	豬	遇	魚	知	<i>hekou</i>	3	<i>ping</i>	ʈiɤ	ʈio	tiəi	L	tɛe
582	豕	止	支	書	<i>kaikou</i>	3	<i>shang</i>	ɕiɛ	ɕie	si	R	si
583	𪚩	蟹	祭	澄	<i>kaikou</i>	3	<i>qu</i>	d̪iɛi	d̪iei	t ^h iəi	H	tɛ ^h e
584	豚	臻	魂	定	<i>hekou</i>	1	<i>ping</i>	d̪ɤon	d̪ɤon	ton	L	ton
585	貉	宕	鐸	匣	<i>kaikou</i>	1	<i>ru</i>	ɦak	ɦak	hak	H	hak
586	貍	山	元	曉	<i>hekou</i>	3	<i>ping</i>	ɦ ^w iɤn	ɦ ^w ion	huən	L	hwʌn
587	狐	遇	模	匣	<i>hekou</i>	1	<i>ping</i>	ɦɤʊ	ɦɤo	ho	L	ho
588	狸	止	之	來	<i>kaikou</i>	3	<i>ping</i>	li	lə	li	L	li
589	熊	通	東	云	<i>hekou</i>	3	<i>ping</i>	ɦiuŋ	ɦiuŋ	uŋ	L	uŋ

590	𪛗	止	支	幫	<i>kaikou</i>	3B	<i>ping</i>	p ^ʷ iɛ	p ^ʷ ie	pi	L	pi
591	驤	宕	鐸	透	<i>kaikou</i>	1	<i>ru</i>	tʰak	tʰak	tʰik	H	tʰak
592	駝	果	歌	定	<i>kaikou</i>	1	<i>ping</i>	da	da	tʰa	L	tʰa
593	狗	流	侯	見	<i>kaikou</i>	1	<i>shang</i>	ku	ku	ku	H	ku
594	獒	效	豪	疑	<i>kaikou</i>	1	<i>ping</i>	ŋau	ŋau	o	L	o
595	犬	山	先	溪	<i>hekou</i>	4	<i>shang</i>	k ^h wen	k ^h wen	kiən	R	kiɛn
596	厖	江	江	明	<i>kaikou</i>	2	<i>ping</i>	mɔŋ	mɔŋ	paŋ	L	paŋ
597	馬	假	麻	明	<i>kaikou</i>	2	<i>shang</i>	m ^ʷ æ	m ^ʷ a	ma	H	ma
598	牛	流	尤	疑	<i>kaikou</i>	3	<i>ping</i>	ŋiu	ŋəu	u	L	u
599	驢	遇	魚	來	<i>hekou</i>	3	<i>ping</i>	liɿ	lio	liə	L	liɤ
600	騾	果	戈	來	<i>hekou</i>	1	<i>ping</i>	l ^w a	l ^w a	lo	L	lo
601	獬	山	桓	透	<i>hekou</i>	1	<i>ping</i>	tʰwan	tʰwan	tan	L	tan
602	獾	山	桓	曉	<i>hekou</i>	1	<i>ping</i>	h ^w an	h ^w an	hoan	L	hwan
603	兔	遇	模	透	<i>hekou</i>	1	<i>qu</i>	tʰɤo	tʰɤo	tʰo	R	tʰo
604	蝟	止	微	云	<i>hekou</i>	3	<i>qu</i>	fi ^w i	fi ^w iəi	ui	R	y
605	鼯	臻	文	奉	<i>hekou</i>	3	<i>ping</i>	biun	biun	pun	L	pun
606	鼠	遇	魚	書	<i>hekou</i>	3	<i>shang</i>	ɕiɿ	ɕio	siə	R	sɤ
607	鼯	遇	模	疑	<i>hekou</i>	1	<i>ping</i>	ŋɤo	ŋɤo	o	L	o
608	鼯	梗	庚	生	<i>kaikou</i>	2	<i>ping</i>	ʂ ^ʷ æŋ	ʂ ^ʷ aŋ	sɛiŋ	L	sæŋ
609	龍	通	鍾	來	<i>hekou</i>	3	<i>ping</i>	liɤŋ	liɤŋ	liŋ	L	liŋ

610	龜	止	脂	見	hekou	3B	ping	k ^w ɿ	k ^w ɿ	kui	L	ky
611	鼃	山	元	疑	hekou	3	ping	ŋ ^w iɤn	ŋ ^w ion	uən	L	wɔn
612	鼈	山	薛	幫	kaikou	3A	ru	piɛt	piɛt	piəl	H	pjɔl
613	螃	宕	唐	並	kaikou	1	ping	baŋ	baŋ	paŋ	L	paŋ
614	蟹	蟹	佳	匣	kaikou	2	ping	ɦ ^ɥ ɛ	ɦ ^ɥ e	ɦɔi	L	ɦæ
615	蠣	蟹	祭	來	kaikou	3	qu	liɛi	liei	liə	R	ljɔ
616	螳	梗	清	徹	kaikou	3	ping	t ^h iɛŋ	t ^h ieŋ	tiəŋ	L	tɛɔŋ
617	鰕	假	麻	匣	kaikou	2	ping	ɦ ^ɥ æ	ɦ ^ɥ a	ɦa	L	ɦa
618	肥	假	麻	滂	kaikou	2	ping	p ^h ɥæ	p ^h ɥa	p ^h a	R	p ^h a
619	蚌	江	江	並	kaikou	2	shang	bɔŋ	bɔŋ	paŋ	R	paŋ
620	鮓	江	覺	並	kaikou	2	ru	b ^ɥ ɔk	b ^ɥ ok	pak	H	pak
621	蛤	咸	合	見	kaikou	1	ru	kəp	kəp	ɦap	H	ɦap
622	蜊	止	脂	來	kaikou	3	ping	li	li	li	L	li
623	蜆	臻	真	禪	kaikou	3	shang	dzin	dzin	sin	R	sin
624	蟹	山	先	曉	kaikou	4	shang	hen	hen	hiən	R	hjɔn
625	鯨	梗	庚	群	kaikou	3	ping	giəŋ	gian	kiəŋ	L	kjɔŋ
626	鮓	蟹	齊	疑	kaikou	4	ping	ŋei	ŋei	iəi	L	je
627	鰱	山	仙	來	kaikou	3	ping	liɛn	lien	liən	L	ljɔn
628	魴	宕	陽	奉	kaikou	3	ping	bian	bian	paŋ	L	paŋ
629	鰻	山	桓	明	hekou	1	ping	m ^w an	m ^w an	man	L	man

630	鱸	止	支	來	<i>kaikou</i>	3	<i>ping</i>	liɛ	lie	li	L	li
631	鯽	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iu	ts ^h iəu	ts ^h iu	L	tɕ ^h u
632	鱸	山	仙	禪	<i>kaikou</i>	3	<i>shang</i>	dziɛn	dzien	siən	R	sɔn
633	鮒	遇	虞	奉	<i>hekou</i>	3	<i>qu</i>	biɤʔ	biɤo	pu	R	pu
634	鯽	曾	職	精	<i>kaikou</i>	3	<i>ru</i>	tsik	tsiək	tsik	H	tɕuɪk
635	鰕	山	月	見	<i>hekou</i>	3	<i>ru</i>	k ^w iɪt	k ^w iot	kuəl	H	kwɔl
636	鰕	曾	德	來	<i>kaikou</i>	1	<i>ru</i>	lək	lək	lik	H	luɪk
637	鰕	止	之	莊	<i>kaikou</i>	3	<i>ping</i>	tɕi	tɕə	ts ^h ii	L	tɕ ^h i
638	鰕	效	蕭	定	<i>kaikou</i>	4	<i>ping</i>	deu	deu	tio	L	tɕo
639	鯖	梗	青	清	<i>kaikou</i>	4	<i>ping</i>	ts ^h ɛŋ	ts ^h ɛŋ	ts ^h iəŋ	L	tɕ ^h ɔŋ
640	鰕	蟹	齊	來	<i>kaikou</i>	4	<i>shang</i>	lei	lei	liəi	R	lje
641	鰕	果	歌	匣	<i>kaikou</i>	1	<i>ping</i>	ɦa	ɦa	ha	L	ha
642	鮑	臻	魂	定	<i>hekou</i>	1	<i>ping</i>	dɤon	dɤon	ton	L	ton
643	鮑	咸	添	泥	<i>kaikou</i>	4	<i>ping</i>	nem	nem	niəm	L	njɔm
644	鰕	山	仙	影	<i>kaikou</i>	3B	<i>qu</i>	ʔ ^v iɛn	ʔ ^v ien	ən	R	ɔn
645	鯊	假	麻	生	<i>kaikou</i>	2	<i>ping</i>	ɕ ^v æ	ɕ ^v a	sa	L	sa
646	鱸	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lɤo	lɤo	lo	L	lo
647	鰕	通	東	精	<i>hekou</i>	1	<i>ping</i>	tsuŋ	tsuŋ	tsoŋ	L	tɕoŋ
648	鯉	止	之	來	<i>kaikou</i>	3	<i>shang</i>	li	lə	li	R	li
649	蚬	止	支	知	<i>kaikou</i>	3	<i>ping</i>	tɕiɛ	tɕie	ti	L	tɕei

650	蛛	遇	虞	知	hekou	3	ping	t̪i̯ʊʊ	t̪i̯ʊʊ	tiu	L	t̪eu
651	𧈧	梗	昔	昌	kaikou	3	ru	t̪ɕʰiɛk	t̪ɕʰiɛk	tsʰiək	H	t̪ɕʰɛk
652	蠓	宕	鐸	影	hekou	1	ru	ʔʷak	ʔʷak	hoak	H	hwak
653	蛉	梗	青	來	kaikou	4	ping	leŋ	leŋ	liəŋ	L	ljɛŋ
654	蜩	山	薛	來	kaikou	3	ru	liet	liet	liəl	H	ljɛl
655	蜻	梗	青	清	kaikou	4	ping	tsʰeŋ	tsʰeŋ	tsʰiəŋ	L	t̪ɕʰɛŋ
656	蜓	梗	青	定	kaikou	4	ping	deŋ	deŋ	tiəŋ	L	t̪ɕɛŋ
657	蟪	效	蕭	心	kaikou	4	ping	seu	seu	sio	L	so
658	蛸	效	肴	生	kaikou	2	ping	ɕʰæu	ɕʰæu	sio	L	so
659	蟪	止	之	曉	kaikou	3	shang	hi	hə	hii	H	hwi
660	螯	效	豪	疑	kaikou	1	ping	ŋau	ŋau	o	L	o
661	蛱	咸	帖	見	kaikou	4	ru	kep	kep	hiəp	H	hjɛp
662	蝶	咸	帖	定	kaikou	4	ru	dep	dep	tiəp	H	t̪ɕɛp
663	蛾	果	歌	疑	kaikou	1	ping	ŋa	ŋa	a	L	a
664	螢	梗	青	匣	hekou	4	ping	fiəŋ	fiəŋ	hiəŋ	L	hjɛŋ
665	蚯	流	尤	溪	kaikou	3	ping	kʰiu	kʰəu	ku	L	ku
666	蚓	臻	真	以	kaikou	3	shang	jin	jin	in	H	in
667	蚰	通	燭	溪	hekou	3	ru	kʰi̯ʊʊk	kʰi̯ʊʊk	kok	H	kok
668	蟾	山	仙	禪	kaikou	3	qu	dziɛn	dziɛn	siən	R	sɛn
669	蟻	蟹	齊	從	kaikou	4	ping	dzei	dzei	tsiəi	L	t̪ɕe

670	螯	效	豪	從	<i>kaikou</i>	1	<i>ping</i>	dzau	dzau	tso	L	tɕo
671	蝸	假	麻	見	<i>hekou</i>	2	<i>ping</i>	k ^w æ	k ^w a	koa	L	kwa
672	蠅	曾	蒸	以	<i>kaikou</i>	3	<i>ping</i>	jiŋ	jiəŋ	siŋ	L	suŋ
673	蛇	假	麻	船	<i>kaikou</i>	3	<i>ping</i>	ziæ	zia	sia	L	sa
674	蟒	宕	唐	明	<i>kaikou</i>	1	<i>shang</i>	maŋ	maŋ	maŋ	L	maŋ
675	虺	止	微	曉	<i>hekou</i>	3	<i>shang</i>	hii	həi	huəi	R	hwe
676	蝮	通	屋	敷	<i>hekou</i>	3	<i>ru</i>	p ^h iuk	p ^h iuk	pok	H	pok
677	蜃	蟹	夬	徹	<i>kaikou</i>	2	<i>qu</i>	t ^h æi	t ^h ai	t ^h ai	H	t ^h æ
678	蠍	山	月	曉	<i>kaikou</i>	3	<i>ru</i>	hiɿ	hiot	həl	H	həl
679	蚊	臻	文	微	<i>hekou</i>	3	<i>ping</i>	miun	miun	mun	L	mun
680	虻	梗	庚	明	<i>kaikou</i>	2	<i>ping</i>	m ^ʷ æŋ	m ^ʷ aŋ	mɿŋ	L	mæŋ
681	蝥	遇	魚	書	<i>hekou</i>	3	<i>shang</i>	eiɿ	ɛio	siə	R	sɿ
682	蝥	流	尤	奉	<i>kaikou</i>	3	<i>shang</i>	biu	biəu	pu	H	pu
683	蚱	止	脂	影	<i>kaikou</i>	3A	<i>ping</i>	ʔi	ʔi	i	L	i
684	蜚	止	微	影	<i>hekou</i>	3	<i>ping</i>	ʔii	ʔəi	ui	L	y
685	蠲	遇	虞	群	<i>hekou</i>	3	<i>ping</i>	giɿɔ	giɿo	ku	L	ku
686	蝮	流	尤	生	<i>kaikou</i>	3	<i>ping</i>	ʂiu	ʂəu	su	L	su
687	蜚	宕	陽	溪	<i>kaikou</i>	3	<i>ping</i>	k ^h iaŋ	k ^h iaŋ	kaŋ	L	kaŋ
688	娘	宕	陽	來	<i>kaikou</i>	3	<i>ping</i>	liaŋ	liaŋ	liaŋ	L	ljaŋ
689	螫	梗	庚	見	<i>kaikou</i>	3	<i>ping</i>	kiæŋ	kiaŋ	kiəŋ	L	kjɿŋ

690	黽	梗	耕	明	<i>kaikou</i>	2	<i>shang</i>	m ^y ɛŋ	m ^y ɛŋ	miəŋ	R	mjʌŋ
691	蛙	假	麻	影	<i>hekou</i>	2	<i>ping</i>	ʔ ^w æ	ʔ ^w a	oa	L	wa
692	蠲	梗	麥	見	<i>hekou</i>	2	<i>ru</i>	k ^w ɛk	k ^w ek	kuk	H	kuk
693	蜩	效	蕭	定	<i>kaikou</i>	4	<i>ping</i>	deu	deu	tio	L	tɕo
694	蟬	山	仙	禪	<i>kaikou</i>	3	<i>ping</i>	dziɛn	dzien	siən	L	sʌn
695	螻	臻	真	從	<i>kaikou</i>	3	<i>ping</i>	dzin	dzin	tsin	L	tɕin
696	蟾	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
697	蚰	流	尤	以	<i>kaikou</i>	3	<i>ping</i>	jiu	jəu	iu	L	iu
698	蜨	山	仙	以	<i>kaikou</i>	3	<i>ping</i>	jiɛn	jien	iən	L	jʌn
699	蚕	咸	覃	從	<i>kaikou</i>	1	<i>ping</i>	dzəm	dzəm	tsʌm	L	team
700	蛹	通	鍾	以	<i>hekou</i>	3	<i>shang</i>	jiɤŋ	jiɤŋ	ioŋ	R	joŋ
701	蝙	山	先	幫	<i>kaikou</i>	4	<i>ping</i>	pen	pen	p ^h iən	L	p ^h jʌn
702	蝠	通	屋	非	<i>hekou</i>	3	<i>ru</i>	piuk	piuk	pok	H	pok
703	螳	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
704	螂	宕	唐	來	<i>kaikou</i>	1	<i>ping</i>	laŋ	laŋ	laŋ	L	laŋ
705	螻	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu
706	蛄	遇	模	見	<i>hekou</i>	1	<i>ping</i>	kɤo	kɤo	ko	L	ko
707	蟬	咸	覃	定	<i>kaikou</i>	1	<i>ping</i>	dəm	dəm	tam	L	tam
708	蝗	蟹	齊	幫	<i>kaikou</i>	4	<i>ping</i>	pei	pei	pi	L	pi
709	蜈	遇	模	疑	<i>hekou</i>	1	<i>ping</i>	ŋɤo	ŋɤo	o	L	o

710	蚣	通	東	見	hekou	1	ping	kuŋ	kuŋ	koŋ	L	koŋ
711	蛭	臻	質	章	kaikou	3	ru	teit	teit	til	H	teil
712	蟻	宕	唐	匣	hekou	1	ping	fi ^w aŋ	fi ^w aŋ	hoan	L	hwan
713	蜥	梗	錫	心	kaikou	4	ru	sek	sek	siək	H	sək
714	蜴	梗	昔	以	kaikou	3	ru	jiək	jiək	tʰiək	H	te ^h ək
715	蝶	梗	庚	云	hekou	3	ping	fi ^w iæŋ	fi ^w iaŋ	iəŋ	L	jʌŋ
716	蚯	山	元	疑	hekou	3	ping	ŋiɤn	ŋion	uən	L	wʌn
717	螞	假	麻	明	kaikou	2	shang	m ^ʷ æ	m ^ʷ a	ma	R	ma
718	蚱	假	麻	莊	kaikou	2	shang	tɕ ^ʷ æ	tɕ ^ʷ a	tɕa	R	teɕa
719	蝗	宕	唐	匣	hekou	1	ping	fi ^w aŋ	fi ^w aŋ	hoan	L	hwan
720	蝨	通	東	章	hekou	3	ping	teiun	teiun	tsion	L	teon
721	螺	果	戈	來	hekou	1	ping	l ^w a	l ^w a	la	L	la
722	蝨	止	脂	生	kaikou	3	ping	ʂi	ʂi	sʌ	L	sa
723	蟹	山	刪	幫	kaikou	2	ping	p ^ʷ æn	p ^ʷ an	pan	L	pan
724	蝨	效	肴	明	kaikou	2	ping	m ^ʷ æu	m ^ʷ au	mo	L	mo
725	蟋	臻	質	心	kaikou	3	ru	sit	sit	sil	H	sil
726	蟀	臻	術	生	hekou	3	ru	ʂ ^w it	ʂ ^w it	sol	H	sol
727	蟻	止	支	疑	kaikou	3B	shang	ŋ ^ʷ iɛ	ŋ ^ʷ ie	ii	R	ui
728	蝨	通	鍾	群	hekou	3	ping	giuon	giuon	koŋ	L	koŋ
729	虻	臻	迄	溪	kaikou	3	ru	kʰit	kʰiət	kəl	H	kəl

730	蚤	效	豪	精	<i>kaikou</i>	1	<i>shang</i>	tsau	tsau	tso	R	tɕo
731	蟣	止	微	見	<i>kaikou</i>	3	<i>shang</i>	kii	kəi	kii	R	ki
732	蝨	臻	櫛	生	<i>kaikou</i>	3	<i>ru</i>	ʂit	ʂit	sɪl	H	sul
733	蜉	流	尤	奉	<i>kaikou</i>	3	<i>ping</i>	biu	biəu	pu	L	pu
734	蜉	流	尤	以	<i>kaikou</i>	3	<i>ping</i>	jiu	jəu	iu	L	ju
735	蟻	山	屑	明	<i>kaikou</i>	4	<i>ru</i>	met	met	miəl	H	mjɐl
736	蠓	通	東	明	<i>hekou</i>	1	<i>ping</i>	mun	mun	mon	L	mon
737	蛆	遇	魚	精	<i>hekou</i>	3	<i>ping</i>	tsiɿ	tsio	tsiə	L	tɕɐ
738	蜂	通	鍾	敷	<i>hekou</i>	3	<i>ping</i>	pʰiɿŋ	pʰiɿŋ	poŋ	L	poŋ
739	蛀	遇	虞	章	<i>hekou</i>	3	<i>qu</i>	teiɿɔ	teiɿo	tsiu	H	tɕeu
740	蠹	遇	模	端	<i>hekou</i>	1	<i>qu</i>	tɿo	tɿo	tu	H	tu
741	玳	蟹	哈	定	<i>kaikou</i>	1	<i>shang</i>	dəi	dəi	tai	R	tæ
742	瑁	效	豪	明	<i>kaikou</i>	1	<i>qu</i>	mau	mau	mo	L	mo
743	蠟	山	屑	影	<i>kaikou</i>	4	<i>ru</i>	ʔet	ʔet	iəi	H	jɐl
744	螞	通	東	影	<i>hekou</i>	1	<i>ping</i>	ʔun	ʔun	oŋ	L	oŋ
745	蝦	假	麻	匣	<i>kaikou</i>	2	<i>ping</i>	ɦʷæ	ɦʷa	ha	L	ha
746	蟆	假	麻	明	<i>kaikou</i>	2	<i>ping</i>	mʷæ	mʷa	ma	L	ma
747	蟾	咸	鹽	禪	<i>kaikou</i>	3	<i>ping</i>	dziem	dziem	siəm	L	sɐm
748	蜍	遇	魚	以	<i>hekou</i>	3	<i>ping</i>	jiɿ	jio	iə	L	jɐ
749	蝌	果	戈	溪	<i>hekou</i>	1	<i>ping</i>	kʰwɐ	kʰwɐ	koa	L	kwa

750	蚪	流	侯	端	<i>kaikou</i>	1	<i>shang</i>	tu	tu	tu	H	tu
751	蛞	山	末	溪	<i>hekou</i>	1	<i>ru</i>	k ^{hw} an	k ^{hw} an	hoal	H	hwal
752	蠹	通	東	端	<i>hekou</i>	1	<i>ping</i>	tuŋ	tuŋ	toŋ	L	toŋ
753	身	臻	真	書	<i>kaikou</i>	3	<i>ping</i>	ɕin	ɕin	sin	L	sin
754	貌	效	肴	明	<i>kaikou</i>	2	<i>qu</i>	m ^ʷ æu	m ^ʷ au	mo	R	mo
755	肢	止	支	章	<i>kaikou</i>	3	<i>ping</i>	tɕiɛ	tɕie	tsi	L	tɕi
756	體	蟹	齊	透	<i>kaikou</i>	4	<i>shang</i>	t ^h ei	t ^h ei	t ^h iɛi	H	ts ^h e
757	顏	山	刪	疑	<i>kaikou</i>	2	<i>ping</i>	ŋ ^ʷ æn	ŋ ^ʷ an	an	L	an
758	面	山	仙	明	<i>kaikou</i>	3A	<i>qu</i>	miɛn	mien	miən	R	mjɒn
759	形	梗	青	匣	<i>kaikou</i>	4	<i>ping</i>	fiɛŋ	fiɛŋ	hiəŋ	L	hjɒŋ
760	容	通	鍾	以	<i>hekou</i>	3	<i>ping</i>	jiɤŋ	jiɤŋ	ioŋ	L	joŋ
761	頭	流	侯	定	<i>kaikou</i>	1	<i>ping</i>	du	du	tu	L	tu
762	首	流	尤	書	<i>kaikou</i>	3	<i>shang</i>	ɕiu	ɕəu	siu	H	su
763	頂	梗	青	端	<i>kaikou</i>	4	<i>shang</i>	teŋ	teŋ	tiəŋ	R	tɕɒŋ
764	顙	臻	真	心	<i>kaikou</i>	3	<i>qu</i>	sin	sin	sin	R	sin
765	額	梗	陌	疑	<i>kaikou</i>	2	<i>ru</i>	ŋ ^ʷ æk	ŋ ^ʷ ak	ɿik	H	æk
766	顙	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lɤo	lɤo	lo	L	lo
767	頤	梗	青	端	<i>kaikou</i>	4	<i>qu</i>	teŋ	teŋ	tiəŋ	R	tɕɒŋ
768	頤	宕	唐	心	<i>kaikou</i>	1	<i>shang</i>	saŋ	saŋ	saŋ	R	saŋ
769	頤	蟹	咍	心	<i>kaikou</i>	1	<i>ping</i>	səi	səi	sii	L	swi

770	頰	咸	帖	見	<i>kaikou</i>	4	<i>ru</i>	<i>kep</i>	<i>kep</i>	<i>hiəp</i>	H	<i>hjaɲ</i>
771	顴	山	仙	群	<i>hekou</i>	3B	<i>ping</i>	<i>g^wɿɛn</i>	<i>g^wɿɛn</i>	<i>koan</i>	R	<i>kwan</i>
772	臉	咸	鹽	來	<i>kaikou</i>	3	<i>qu</i>	<i>liɛm</i>	<i>liɛm</i>	<i>liəm</i>	R	<i>ljaɪm</i>
773	頰	臻	沒	並	<i>hekou</i>	1	<i>ru</i>	<i>bɯot</i>	<i>bɯot</i>	<i>pɔl</i>	H	<i>pal</i>
774	頰	梗	清	見	<i>hekou</i>	3A	<i>shang</i>	<i>kiɛŋ</i>	<i>kiɛŋ</i>	<i>kiəŋ</i>	R	<i>kjaŋ</i>
775	脰	流	侯	定	<i>kaikou</i>	1	<i>qu</i>	<i>du</i>	<i>du</i>	<i>tu</i>	H	<i>tu</i>
776	項	江	江	匣	<i>kaikou</i>	2	<i>shang</i>	<i>fiɔŋ</i>	<i>fiɔŋ</i>	<i>haŋ</i>	R	<i>haŋ</i>
777	眼	山	山	疑	<i>kaikou</i>	2	<i>shang</i>	<i>ŋ^ɿɛn</i>	<i>ŋ^ɿɛn</i>	<i>an</i>	R	<i>an</i>
778	目	通	屋	明	<i>hekou</i>	3	<i>ru</i>	<i>miuk</i>	<i>miuk</i>	<i>mok</i>	H	<i>mok</i>
779	睛	梗	清	精	<i>kaikou</i>	3	<i>ping</i>	<i>tsiɛŋ</i>	<i>tsiɛŋ</i>	<i>ts^hiəŋ</i>	L	<i>tɕɛŋ</i>
780	瞳	通	東	定	<i>hekou</i>	1	<i>ping</i>	<i>duŋ</i>	<i>duŋ</i>	<i>toŋ</i>	L	<i>toŋ</i>
781	眸	流	尤	明	<i>kaikou</i>	3	<i>ping</i>	<i>miu</i>	<i>məu</i>	<i>mo</i>	L	<i>mo</i>
782	瞼	咸	鹽	見	<i>kaikou</i>	3B	<i>shang</i>	<i>k^ɿɛm</i>	<i>k^ɿɛm</i>	<i>kəm</i>	R	<i>kɔm</i>
783	眉	止	脂	明	<i>kaikou</i>	3B	<i>ping</i>	<i>m^ɿi</i>	<i>m^ɿi</i>	<i>mi</i>	L	<i>mi</i>
784	睫	咸	葉	精	<i>kaikou</i>	3	<i>ru</i>	<i>ts^ɿiɛp</i>	<i>ts^ɿiɛp</i>	<i>ts^hiəp</i>	H	<i>tɕ^hɛp</i>
785	鬢	臻	真	幫	<i>kaikou</i>	3A	<i>qu</i>	<i>pin</i>	<i>pin</i>	<i>piŋ</i>	R	<i>piŋ</i>
786	頤	止	之	以	<i>kaikou</i>	3	<i>ping</i>	<i>ji</i>	<i>jə</i>	<i>i</i>	L	<i>i</i>
787	頤	咸	覃	匣	<i>kaikou</i>	1	<i>ping</i>	<i>fiəm</i>	<i>fiəm</i>	<i>ham</i>	L	<i>ham</i>
788	頤	蟹	哈	匣	<i>kaikou</i>	1	<i>ping</i>	<i>fiəi</i>	<i>fiəi</i>	<i>hɔi</i>	L	<i>hæ</i>
789	脰	宕	鐸	見	<i>kaikou</i>	1	<i>ru</i>	<i>kak</i>	<i>kak</i>	<i>kak</i>	H	<i>kak</i>

790	腋	梗	昔	以	<i>kaikou</i>	3	<i>ru</i>	jiək	jiək	ɿik	H	æk
791	肋	曾	德	來	<i>kaikou</i>	1	<i>ru</i>	lək	lək	lik	H	luək
792	脇	咸	業	曉	<i>kaikou</i>	3	<i>ru</i>	hiap	hiap	həp	H	hɿp
793	肩	山	先	見	<i>kaikou</i>	4	<i>ping</i>	ken	ken	kiən	L	kjɿn
794	臍	效	豪	泥	<i>kaikou</i>	1	<i>qu</i>	nau	nau	nio	R	nio
795	隅	流	侯	疑	<i>kaikou</i>	1	<i>shang</i>	ŋu	ŋu	u	R	u
796	胛	咸	狎	見	<i>kaikou</i>	2	<i>ru</i>	kʷæp	kʷap	kap	H	kap
797	拳	山	仙	群	<i>hekou</i>	3B	<i>ping</i>	gʷɿɛn	gʷɿen	kuən	L	kwɿn
798	膈	果	戈	見	<i>hekou</i>	1	<i>ping</i>	kʷa	kʷa	koa	L	kwa
799	肱	臻	迄	溪	<i>kaikou</i>	3	<i>ru</i>	kʰit	kʰiət	kəl	H	kɿl
800	膊	宕	鐸	滂	<i>kaikou</i>	1	<i>ru</i>	pʰak	pʰak	pak	H	pak
801	口	流	侯	溪	<i>kaikou</i>	1	<i>shang</i>	kʰu	kʰu	ku	H	ku
802	舌	山	薛	船	<i>kaikou</i>	3	<i>ru</i>	ziɛt	ziet	siəl	H	sɿl
803	唇	臻	諄	船	<i>hekou</i>	3	<i>ping</i>	zʷin	zʷin	siun	L	sun
804	吻	臻	文	微	<i>hekou</i>	3	<i>shang</i>	miun	miun	min	R	mun
805	牙	假	麻	疑	<i>kaikou</i>	2	<i>ping</i>	ŋʷæ	ŋʷa	a	L	a
806	齒	止	之	昌	<i>kaikou</i>	3	<i>shang</i>	tɕʰi	tɕʰə	tɕʰi	R	tɕʰi
807	斷	臻	殷	疑	<i>kaikou</i>	3	<i>ping</i>	ŋin	ŋiən	in	L	uən
808	腭	宕	鐸	疑	<i>kaikou</i>	1	<i>ru</i>	ŋak	ŋak	ak	H	ak
809	肱	曾	登	見	<i>hekou</i>	1	<i>ping</i>	kʷəŋ	kʷəŋ	koiŋ	L	kəŋ

810	臂	止	支	幫	<i>kaikou</i>	3A	<i>ping</i>	piɛ	pie	pi	R	pi
811	手	流	尤	書	<i>kaikou</i>	3	<i>shang</i>	ɕiu	ɕəu	siu	H	su
812	掌	宕	陽	章	<i>kaikou</i>	3	<i>shang</i>	teiaŋ	teiaŋ	tsiaŋ	R	teaŋ
813	指	止	脂	章	<i>kaikou</i>	3	<i>shang</i>	tei	tei	tsi	H	tei
814	爪	效	肴	莊	<i>kaikou</i>	2	<i>shang</i>	tɕʰæu	tɕʰau	tso	R	tɕo
815	肘	流	尤	知	<i>kaikou</i>	3	<i>shang</i>	tʃiu	tʃəu	tiu	R	tɕeu
816	腕	山	桓	影	<i>hekou</i>	1	<i>qu</i>	ʔʷan	ʔʷan	oan	R	wan
817	腓	止	微	奉	<i>kaikou</i>	3	<i>ping</i>	bii	biəi	pi	L	pi
818	踦	止	支	溪	<i>kaikou</i>	3B	<i>ping</i>	kʰyiɛ	kʰyie	kii	L	ki
819	腓	山	仙	禪	<i>hekou</i>	3	<i>shang</i>	dzʷien	dzʷien	tsʰiən	R	tɕʰʌn
820	廉	咸	鹽	來	<i>kaikou</i>	3	<i>ping</i>	liem	liem	liəm	L	ljʌm
821	脛	梗	青	匣	<i>kaikou</i>	4	<i>shang</i>	fiɛŋ	fiɛŋ	hiəŋ	R	hjʌŋ
822	脰	梗	庚	匣	<i>kaikou</i>	2	<i>qu</i>	fiʷæŋ	fiʷaŋ	hʌiŋ	R	hæŋ
823	骹	效	肴	溪	<i>kaikou</i>	2	<i>ping</i>	kʰæu	kʰau	kio	L	kjo
824	𦵏	山	刪	匣	<i>kaikou</i>	2	<i>qu</i>	fiʷæn	fiʷan	han	R	han
825	喉	流	侯	匣	<i>kaikou</i>	1	<i>ping</i>	fiu	fiu	hu	L	hu
826	嚨	通	東	來	<i>hekou</i>	1	<i>ping</i>	luŋ	luŋ	loŋ	L	loŋ
827	咽	山	先	影	<i>kaikou</i>	4	<i>ping</i>	ʔen	ʔen	iən	L	jʌn
828	噪	宕	唐	心	<i>kaikou</i>	1	<i>shang</i>	saŋ	saŋ	saŋ	R	saŋ
829	耳	止	之	日	<i>kaikou</i>	3	<i>shang</i>	ɳi	ɳə	zi	R	i

830	睡	果	戈	端	hekou	1	shang	t ^w a	t ^w a	t ^h a	R	t ^h a
831	鼻	止	脂	並	kaikou	3A	qu	bi	bi	pi	R	pi
832	準	臻	諄	章	hekou	3	shang	te ^w in	te ^w in	tsiun	R	teun
833	心	深	侵	心	kaikou	3	ping	sim	sim	sim	L	sim
834	肝	山	寒	見	kaikou	1	ping	kan	kan	kan	L	kan
835	脾	止	支	並	kaikou	3A	ping	biɛ	bie	pi	L	pi
836	肺	蟹	廢	敷	hekou	3	qu	p ^h uai	p ^h uai	p ^h iəi	R	p ^h e
837	腸	宕	陽	澄	kaikou	3	ping	djaŋ	djaŋ	tiaŋ	L	teaŋ
838	胃	止	微	云	hekou	3	qu	ɸ ^w i	ɸ ^w iəi	ui	H	y
839	膽	咸	談	端	kaikou	1	shang	tam	tam	tam	R	tam
840	腎	臻	真	禪	kaikou	3	shang	dzin	dzin	sin	R	sin
841	胸	通	鍾	曉	hekou	3	ping	hiuŋ	hiuŋ	hiuŋ	L	hiuŋ
842	膛	宕	唐	定	kaikou	1	ping	daŋ	daŋ	taŋ	L	taŋ
843	膺	曾	蒸	影	kaikou	3	ping	ʔiŋ	ʔiəŋ	iŋ	L	uŋ
844	臆	曾	職	影	kaikou	3	ru	ʔik	ʔiək	ək	H	ʌk
845	軀	遇	虞	溪	hekou	3	ping	k ^h iyo	k ^h iyo	ku	L	ku
846	膈	梗	麥	見	kaikou	2	ru	k ^ʷ ek	k ^ʷ ek	kiək	H	kjʌk
847	孀	蟹	佳	娘	kaikou	2	ping	ŋ ^ʷ ɛ	ŋ ^ʷ e	nai	R	næ
848	乳	遇	虞	日	hekou	3	shang	ŋiyo	ŋiyo	ziu	R	ju
849	毘	止	脂	並	kaikou	3A	ping	bi	bi	pi	L	pi

850	腴	宕	陽	影	<i>kaikou</i>	3	<i>ping</i>	ʔiaŋ	ʔiaŋ	aŋ	L	aŋ
851	脰	臻	沒	並	<i>hekou</i>	1	<i>ru</i>	bɯot	bɯot	pɒl	H	pal
852	臍	蟹	齊	從	<i>kaikou</i>	4	<i>ping</i>	dzei	dzei	tsiəi	L	tɛe
853	背	蟹	灰	幫	<i>kaikou</i>	1	<i>qu</i>	poi	poi	pɒi	R	pæ
854	脊	梗	昔	精	<i>kaikou</i>	3	<i>ru</i>	tsiek	tsiek	tsʰiək	H	tɕʰɛk
855	腰	效	宵	影	<i>kaikou</i>	3A	<i>ping</i>	ʔiɛu	ʔieu	io	L	jo
856	膂	遇	魚	來	<i>hekou</i>	3	<i>shang</i>	liɿ	lio	liə	R	ljɐ
857	腿	蟹	灰	透	<i>hekou</i>	1	<i>shang</i>	tʰwoi	tʰwoi	tʰoi	R	tʰø
858	胯	假	麻	溪	<i>hekou</i>	2	<i>qu</i>	kʰwɿæ	kʰwɿa	koa	R	kwa
859	髀	止	支	幫	<i>kaikou</i>	3A	<i>ping</i>	piɛ	pie	pi	R	pi
860	股	遇	模	見	<i>hekou</i>	1	<i>shang</i>	kɯo	kɯo	ko	R	ko
861	尻	效	豪	溪	<i>kaikou</i>	1	<i>ping</i>	kʰau	kʰau	ko	L	ko
862	脰	止	脂	禪	<i>hekou</i>	3	<i>ping</i>	dzʷi	dzʷi	siu	L	su
863	臀	臻	魂	定	<i>hekou</i>	1	<i>ping</i>	dɯon	dɯon	tun	L	tun
864	肛	江	江	曉	<i>kaikou</i>	2	<i>ping</i>	hɔŋ	hɔŋ	haŋ	L	haŋ
865	膝	臻	質	心	<i>kaikou</i>	3	<i>ru</i>	sit	sit	sil	H	swl
866	臍	梗	麥	見	<i>hekou</i>	2	<i>ru</i>	kʰwɿɛk	kʰwɿɛk	kuk	H	kuk
867	肫	通	燭	溪	<i>hekou</i>	3	<i>ru</i>	kʰiɯɔk	kʰiɯɔk	kok	H	kok
868	脰	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	tsʰiu	tsʰiəu	tsʰiu	L	tɕʰu
869	尿	效	蕭	泥	<i>kaikou</i>	4	<i>qu</i>	neu	neu	nio	R	njo

870	脬	效	肴	滂	<i>kaikou</i>	2	<i>ping</i>	p ^h æu	p ^h au	p ^h o	L	p ^h o
871	膀	宕	唐	並	<i>kaikou</i>	1	<i>ping</i>	baŋ	baŋ	paŋ	H	paŋ
872	肱	宕	唐	見	<i>hekou</i>	1	<i>ping</i>	k ^w aŋ	k ^w aŋ	koaŋ	L	kwaŋ
873	髮	山	月	非	<i>hekou</i>	3	<i>ru</i>	p ^w iɿt	p ^w iot	pal	H	pal
874	鬚	遇	虞	心	<i>hekou</i>	3	<i>ping</i>	siɿɔ	siɿo	siu	L	su
875	髭	止	支	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛ	tsie	tsʌ	L	tɕa
876	髻	咸	鹽	日	<i>kaikou</i>	3	<i>ping</i>	ɲiɛm	ɲiem	ziɛm	L	jɿm
877	肚	遇	模	定	<i>hekou</i>	1	<i>shang</i>	dɿo	dɿo	tu	H	tu
878	腹	通	屋	非	<i>hekou</i>	3	<i>ru</i>	piuk	piuk	pok	H	pok
879	腔	江	江	溪	<i>kaikou</i>	2	<i>ping</i>	k ^h ɔŋ	k ^h oŋ	kaŋ	L	kaŋ
880	眶	宕	陽	溪	<i>hekou</i>	3	<i>qu</i>	k ^h wiaŋ	k ^h wiaŋ	koaŋ	L	kwaŋ
881	呼	遇	模	曉	<i>hekou</i>	1	<i>ping</i>	hɿo	hɿo	ho	L	ho
882	吸	深	緝	曉	<i>kaikou</i>	3B	<i>ru</i>	h ^ɿ ip	h ^ɿ ip	hip	H	huip
883	脈	梗	麥	明	<i>kaikou</i>	2	<i>ru</i>	m ^ɿ ɛŋ	m ^ɿ ɛŋ	mɿik	H	mæk
884	息	曾	職	心	<i>kaikou</i>	3	<i>ru</i>	sik	siək	sik	H	sik
885	肌	止	脂	見	<i>kaikou</i>	3B	<i>ping</i>	k ^ɿ i	k ^ɿ i	kii	L	ki
886	膚	遇	虞	非	<i>hekou</i>	3	<i>ping</i>	piɿɔ	piɿo	pu	L	pu
887	腓	流	侯	清	<i>kaikou</i>	1	<i>qu</i>	ts ^h u	ts ^h u	tsu	R	tɕu
888	膜	宕	鐸	明	<i>kaikou</i>	1	<i>ru</i>	mak	mak	mak	H	mak
889	髑	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	H	tok

890	體	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu
891	腦	效	豪	泥	<i>kaikou</i>	1	<i>shang</i>	nau	nau	no	R	no
892	髓	止	支	心	<i>hekou</i>	3	<i>ping</i>	s ^w iɛ	s ^w ie	siu	R	su
893	骸	蟹	皆	匣	<i>kaikou</i>	2	<i>ping</i>	ɦ ^ʷ ɛi	ɦ ^ʷ ei	ɦɿ	L	hæ
894	骨	臻	沒	見	<i>hekou</i>	1	<i>ru</i>	kʊot	kʊot	kol	H	kol
895	髓	止	支	從	<i>kaikou</i>	3	<i>ping</i>	dziɛ	dzie	tsɿ	L	tɕa
896	骼	梗	陌	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʷ æk	k ^ʷ ak	kak	H	kak
897	跟	臻	痕	見	<i>kaikou</i>	1	<i>ping</i>	kən	kən	kin	L	kun
898	踵	通	鍾	章	<i>hekou</i>	3	<i>shang</i>	tɕiʊŋ	tɕiʊŋ	tsioŋ	R	tɕoŋ
899	跗	遇	虞	非	<i>hekou</i>	3	<i>ping</i>	piʊɔ	piʊo	pu	L	pu
900	踝	假	麻	匣	<i>hekou</i>	2	<i>shang</i>	ɦ ^w æ	ɦ ^w a	koa	R	kwa
901	拇	流	侯	明	<i>kaikou</i>	1	<i>shang</i>	mu	mu	mo	R	mo
902	趾	止	之	章	<i>kaikou</i>	3	<i>shang</i>	tɕi	tɕə	tsi	L	tɕi
903	足	通	燭	精	<i>hekou</i>	3	<i>ru</i>	tsiʊɔk	tsiʊok	tsiok	H	tɕok
904	腳	宕	藥	見	<i>kaikou</i>	3	<i>ru</i>	kiak	kiak	kak	H	kak
905	躬	通	東	見	<i>hekou</i>	3	<i>ping</i>	kiuŋ	kiuŋ	kun	L	kun
906	影	梗	庚	影	<i>kaikou</i>	3	<i>shang</i>	ʔiæŋ	ʔiaŋ	iæŋ	R	ɟæŋ
907	音	深	侵	影	<i>kaikou</i>	3B	<i>ping</i>	ʔ ^ʷ im	ʔ ^ʷ im	im	L	um
908	聲	梗	清	書	<i>kaikou</i>	3	<i>ping</i>	ɕieŋ	ɕieŋ	siæŋ	L	sæŋ
909	性	梗	清	心	<i>kaikou</i>	3	<i>qu</i>	siɛŋ	siɛŋ	siæŋ	R	sæŋ

910	情	梗	清	從	<i>kaikou</i>	3	<i>ping</i>	dziɛŋ	dziɛŋ	tsiəŋ	L	tɕəŋ
911	志	止	之	章	<i>kaikou</i>	3	<i>qu</i>	tɕi	tɕə	tsi	H	tɕi
912	意	止	之	影	<i>kaikou</i>	3	<i>qu</i>	ʔi	ʔə	ii	R	ui
913	哭	通	屋	溪	<i>hekou</i>	1	<i>ru</i>	kʰuk	kʰuk	kok	H	kok
914	泣	深	緝	溪	<i>kaikou</i>	3B	<i>ru</i>	kʰɿp	kʰɿp	ip	H	uɿp
915	笑	效	宵	心	<i>kaikou</i>	3	<i>qu</i>	siɛu	sieu	sio	H	so
916	晒	臻	真	書	<i>kaikou</i>	3	<i>shang</i>	ɕin	ɕin	sin	R	sin
917	噦	山	月	影	<i>hekou</i>	3	<i>ru</i>	ʔʷɿɿt	ʔʷiot	əl	H	ɿl
918	噫	蟹	皆	影	<i>kaikou</i>	2	<i>qu</i>	ʔʷɕi	ʔʷɕi	ai	R	æ
919	噴	臻	魂	滂	<i>hekou</i>	1	<i>qu</i>	pʰɿon	pʰɿon	pun	H	pun
920	嚏	蟹	齊	端	<i>kaikou</i>	4	<i>qu</i>	tei	tei	tʰiɕi	H	tɕʰe
921	鬚	遇	模	匣	<i>hekou</i>	1	<i>ping</i>	fɿo	fɿo	ho	L	ho
922	禿	通	屋	透	<i>hekou</i>	1	<i>ru</i>	tʰuk	tʰuk	tok	H	tok
923	胖	江	江	滂	<i>kaikou</i>	2	<i>qu</i>	pʰɔŋ	pʰoŋ	pʰaŋ	H	pʰaŋ
924	臞	遇	虞	群	<i>hekou</i>	3	<i>ping</i>	giɿo	giɿo	ku	L	ku
925	叵	流	侯	端	<i>kaikou</i>	1	<i>ping</i>	tu	tu	tu	H	tu
926	眇	止	支	昌	<i>kaikou</i>	3	<i>ping</i>	tɕʰiɛ	tɕʰie	tsʰi	L	tɕʰi
927	鯢	通	東	泥	<i>hekou</i>	1	<i>qu</i>	nuŋ	nuŋ	noŋ	L	noŋ
928	涕	蟹	齊	透	<i>kaikou</i>	4	<i>shang</i>	tʰɕi	tʰɕi	tʰiɕi	H	tɕʰe
929	沫	山	末	明	<i>hekou</i>	1	<i>ru</i>	mʷat	mʷat	mal	H	mal

930	淚	止	脂	來	hekou	3	qu	l ^w i	l ^w i	liu	H	lju
931	唾	果	戈	透	hekou	1	qu	t ^h wa	t ^h wa	t ^h a	H	t ^h a
932	涎	山	仙	邪	kaikou	3	ping	ziɛn	zien	iən	L	jaŋ
933	膿	通	冬	泥	hekou	1	ping	nuoŋ	nuoŋ	noŋ	L	noŋ
934	血	山	屑	曉	kaikou	4	ru	het	het	hiəl	H	hjaɭ
935	液	梗	昔	以	kaikou	3	ru	jiɛk	jiɛk	ɬik	H	æk
936	汗	山	寒	匣	kaikou	1	qu	fian	fian	han	H	han
937	鮑	效	肴	並	kaikou	2	ping	b ^y æu	b ^y au	p ^h o	L	p ^h o
938	瞎	山	鎋	曉	kaikou	2	ru	h ^y æn	h ^y an	hal	H	hal
939	𪗇	果	戈	從	hekou	1	ping	dz ^w a	dz ^w a	tsoa	L	tewa
940	矮	蟹	佳	影	kaikou	2	shang	ʔ ^y ɛ	ʔ ^y e	ai	R	æ
941	魑	假	麻	莊	kaikou	2	ping	tɕ ^y æ	tɕ ^y a	ts ^h a	L	tɛ ^h a
942	鮑	效	肴	並	kaikou	2	qu	b ^y æu	b ^y au	p ^h o	L	p ^h o
943	魑	通	東	影	hekou	1	qu	ʔuŋ	ʔuŋ	oŋ	R	oŋ
944	𪗇	山	寒	匣	kaikou	1	qu	fian	fian	han	R	han
945	搜	流	尤	生	kaikou	3	ping	ɕiu	ɕəu	su	L	su
946	便	山	仙	並	kaikou	3A	ping	bien	bien	p ^h iən	L	p ^h jaŋ
947	戾	止	脂	書	kaikou	3	shang	ɕi	ɕi	si	H	si
948	糞	臻	文	非	hekou	3	qu	piun	piun	pun	H	pun
949	戾	止	支	幫	kaikou	3A	ping	piɛ	pie	pi	R	pi

950	𩚑	遇	魚	從	<i>hekou</i>	3	<i>ping</i>	dziɿ	dzio	tsiu	H	teu
951	屁	止	脂	滂	<i>kaikou</i>	3A	<i>qu</i>	p ^h i	p ^h i	p ^h i	L	p ^h i
952	𩚑	止	脂	滂	<i>kaikou</i>	3A	<i>qu</i>	p ^h i	p ^h i	pi	H	pi
953	眠	山	先	明	<i>kaikou</i>	4	<i>ping</i>	men	men	miən	L	mjʌn
954	睡	止	支	禪	<i>hekou</i>	3	<i>ping</i>	dz ^w iɛ	dz ^w ie	siu	H	su
955	夢	通	東	明	<i>hekou</i>	3	<i>qu</i>	miuŋ	miuŋ	moŋ	R	moŋ
956	覺	效	肴	見	<i>kaikou</i>	2	<i>qu</i>	k ^y æu	k ^y au	kio	R	kjo
957	欠	咸	嚴	溪	<i>kaikou</i>	3	<i>qu</i>	k ^h iam	k ^h iam	him	R	hum
958	伸	臻	真	書	<i>kaikou</i>	3	<i>ping</i>	ɕin	ɕin	sin	L	sin
959	寤	遇	模	疑	<i>hekou</i>	1	<i>qu</i>	ŋɿo	ŋɿo	o	H	o
960	寐	止	脂	明	<i>kaikou</i>	3A	<i>qu</i>	mi	mi	mʌi	H	mæ
961	祖	遇	模	精	<i>hekou</i>	1	<i>shang</i>	tsɿo	tsɿo	tso	H	tɕo
962	父	遇	虞	奉	<i>hekou</i>	3	<i>shang</i>	biɿo	biɿo	pu	H	pu
963	爹	果	歌	定	<i>kaikou</i>	1	<i>shang</i>	da	da	ta	L	ta
964	爺	假	麻	以	<i>kaikou</i>	3	<i>ping</i>	jiæ	jia	ia	L	ja
965	媽	遇	模	明	<i>hekou</i>	1	<i>shang</i>	mɿo	mɿo	ma	R	ma
966	婆	果	戈	並	<i>hekou</i>	1	<i>ping</i>	b ^w a	b ^w a	p ^h a	L	p ^h a
967	考	效	豪	溪	<i>kaikou</i>	1	<i>shang</i>	k ^h au	k ^h au	ko	R	ko
968	妣	止	脂	幫	<i>kaikou</i>	3A	<i>shang</i>	pi	pi	pi	R	pi
969	母	流	侯	明	<i>kaikou</i>	1	<i>shang</i>	mu	mu	mo	R	mo

970	孃	宕	陽	娘	<i>kaikou</i>	3	<i>ping</i>	ŋjaŋ	ŋjaŋ	nian	L	njaŋ
971	妻	蟹	齊	清	<i>kaikou</i>	4	<i>ping</i>	ts ^h ei	ts ^h ei	ts ^h iə	L	tɕ ^h ʌ
972	妾	咸	葉	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h ʲiɛp	ts ^h ʲiɛp	ts ^h iəp	H	tɕ ^h ʌp
973	妯	通	屋	澄	<i>hekou</i>	3	<i>ru</i>	ɕiuk	ɕiuk	t ^h iuk	H	tɕ ^h uk
974	娍	止	之	來	<i>kaikou</i>	3	<i>shang</i>	li	lə	li	R	li
975	娣	蟹	齊	定	<i>kaikou</i>	4	<i>shang</i>	dei	dei	tiəi	R	tɕe
976	姒	止	之	邪	<i>kaikou</i>	3	<i>shang</i>	zi	zə	sʌ	R	sa
977	男	咸	覃	泥	<i>kaikou</i>	1	<i>ping</i>	nəm	nəm	nam	L	nam
978	女	遇	魚	娘	<i>hekou</i>	3	<i>shang</i>	ŋiɤ	ŋio	niə	H	ŋjʌ
979	夫	遇	虞	非	<i>hekou</i>	3	<i>ping</i>	piɤʔ	piɤʔ	pu	L	pu
980	婦	流	尤	奉	<i>kaikou</i>	3	<i>shang</i>	biu	biəu	pu	H	pu
981	嫡	梗	錫	端	<i>kaikou</i>	4	<i>ru</i>	tek	tek	tiək	H	tɕʌk
982	孽	山	薛	疑	<i>kaikou</i>	3B	<i>ru</i>	ŋ ^ʲ iɛt	ŋ ^ʲ iɛt	əl	H	ʌl
983	眷	山	仙	見	<i>hekou</i>	3B	<i>qu</i>	k ^w ʲiɛn	k ^w ʲiɛn	kuən	R	kwʌn
984	族	通	屋	從	<i>hekou</i>	1	<i>ru</i>	dzuk	dzuk	tsok	H	tɕok
985	姁	深	侵	群	<i>kaikou</i>	3B	<i>qu</i>	g ^ʲ im	g ^ʲ im	kim	R	kum
986	嫂	效	豪	心	<i>kaikou</i>	1	<i>shang</i>	sau	sau	su	R	su
987	孀	深	侵	書	<i>kaikou</i>	3	<i>shang</i>	ɕim	ɕim	sim	R	sim
988	娘	宕	陽	娘	<i>kaikou</i>	3	<i>ping</i>	ŋjaŋ	ŋjaŋ	nian	L	naŋ
989	舅	流	尤	群	<i>kaikou</i>	3	<i>shang</i>	giu	gəu	ku	R	ku

990	姑	遇	模	見	<i>hekou</i>	1	<i>ping</i>	k _ɥ o	k _ɥ o	ko	L	ko
991	伯	梗	陌	幫	<i>kaikou</i>	2	<i>ru</i>	p ^ʷ æk	p ^ʷ ak	pɿik	H	pæk
992	叔	通	屋	書	<i>hekou</i>	3	<i>ru</i>	ɕiuk	ɕiuk	siuk	H	suk
993	兄	梗	庚	曉	<i>hekou</i>	3	<i>ping</i>	h ^w iæŋ	h ^w iaŋ	hiəŋ	L	hɟʌŋ
994	哥	果	歌	見	<i>kaikou</i>	1	<i>ping</i>	ka	ka	ka	L	ka
995	昆	臻	魂	見	<i>hekou</i>	1	<i>ping</i>	k _ɥ on	k _ɥ on	kon	L	kon
996	弟	蟹	齊	定	<i>kaikou</i>	4	<i>shang</i>	dei	dei	tiəi	H	tɕe
997	姨	止	脂	以	<i>kaikou</i>	3	<i>ping</i>	ji	ji	i	L	i
998	姐	假	麻	精	<i>kaikou</i>	3	<i>shang</i>	tsiæ	tsia	tsiə	R	tɕʌ
999	姊	止	脂	精	<i>kaikou</i>	3	<i>shang</i>	tsi	tsi	tsʌ	R	tɕʌ
1000	妹	蟹	灰	明	<i>kaikou</i>	1	<i>qu</i>	moi	moi	mɿi	R	mæ
1001	兒	止	支	日	<i>kaikou</i>	3	<i>ping</i>	ŋiɛ	ŋie	zʌ	L	a
1002	童	通	東	定	<i>hekou</i>	1	<i>ping</i>	duŋ	duŋ	toŋ	L	toŋ
1003	罔	山	仙	見	<i>kaikou</i>	3B	<i>shang</i>	k ^ʷ iɛn	k ^ʷ ien	kiən	L	kɟʌn
1004	子	止	之	精	<i>kaikou</i>	3	<i>shang</i>	tsi	tsə	tsʌ	H	tɕʌ
1005	姪	臻	質	澄	<i>kaikou</i>	3	<i>ru</i>	ɖit	ɖit	til	H	tɕeil
1006	孫	臻	魂	心	<i>hekou</i>	1	<i>ping</i>	s _ɥ on	s _ɥ on	son	L	son
1007	甥	梗	庚	生	<i>kaikou</i>	2	<i>ping</i>	ɕ ^ʷ æŋ	ɕ ^ʷ aŋ	sɿiŋ	L	sæŋ
1008	壻	蟹	齊	心	<i>kaikou</i>	4	<i>qu</i>	sei	sei	siə	H	sʌ
1009	嬰	梗	清	影	<i>hekou</i>	3A	<i>ping</i>	ʔiɛŋ	ʔien	iəŋ	L	ɟʌŋ

1010	孩	蟹	哈	匣	<i>kaikou</i>	1	<i>ping</i>	həi	həi	həi	L	hæ
1011	韶	效	蕭	定	<i>kaikou</i>	4	<i>ping</i>	deu	deu	t ^h io	L	tɛ ^h o
1012	齟	臻	臻	初	<i>kaikou</i>	3	<i>qu</i>	tɕ ^h in	tɕ ^h in	ts ^h in	R	tɛ ^h in, tɛ ^h un
1013	幼	流	幽	影	<i>kaikou</i>	3	<i>qu</i>	ʔiu	ʔiu	iu	R	ju
1014	沖	通	東	澄	<i>hekou</i>	3	<i>ping</i>	d̪iʊŋ	d̪iʊŋ	t ^h iʊŋ	L	tɛ ^h uŋ
1015	孺	遇	虞	日	<i>hekou</i>	3	<i>qu</i>	ɳiʊʔ	ɳiʊʔ	ziu	R	ju
1016	稚	止	脂	澄	<i>kaikou</i>	3	<i>qu</i>	d̪i	d̪i	t ^h i	R	tɛ ^h i
1017	姓	梗	清	心	<i>kaikou</i>	3	<i>qu</i>	siɛŋ	sieŋ	siəŋ	R	sʌŋ
1018	氏	止	支	禪	<i>kaikou</i>	4	<i>shang</i>	ɕiɛ	ɕie	si	H	s*ɪ
1019	名	梗	清	明	<i>hekou</i>	3A	<i>ping</i>	miɛŋ	mieŋ	miəŋ	L	mjʌŋ
1020	號	效	豪	匣	<i>kaikou</i>	1	<i>qu</i>	hau	hau	ho	R	ho
1021	親	臻	真	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h in	ts ^h in	ts ^h in	L	tɛ ^h in
1022	戚	梗	錫	清	<i>kaikou</i>	4	<i>ru</i>	ts ^h ek	ts ^h ek	ts ^h iək	H	tɛ ^h ʌk
1023	宗	通	冬	精	<i>hekou</i>	1	<i>ping</i>	tsʊŋ	tsʊŋ	t ^h oŋ	L	t ^h oŋ
1024	系	蟹	齊	匣	<i>kaikou</i>	4	<i>qu</i>	ɬei	ɬei	kiəi	R	kje
1025	奴	遇	模	泥	<i>hekou</i>	1	<i>ping</i>	nʊʔ	nʊʔ	no	L	no
1026	婢	止	支	並	<i>kaikou</i>	3A	<i>ping</i>	biɛ	bie	pi	R	pi
1027	僮	通	東	定	<i>hekou</i>	1	<i>ping</i>	d̪uŋ	d̪uŋ	toŋ	L	toŋ
1028	僕	通	屋	並	<i>hekou</i>	1	<i>ru</i>	buk	buk	pok	R	pok
1029	姆	流	侯	明	<i>kaikou</i>	1	<i>qu</i>	mu	mu	mo	R	mo

1030	嫗	遇	虞	影	hekou	3	qu	ʔiɿɿɔ	ʔiɿɔ	ku	R	ku
1031	姥	遇	模	明	hekou	1	shang	mɿɔ	mɿɔ	mo	R	mo
1032	媼	效	豪	影	kaikou	1	shang	ʔau	ʔau	o	R	o
1033	鰥	山	山	見	hekou	2	ping	k ^w ɿɛn	k ^w ɿen	hoan	L	hwan
1034	寡	假	麻	見	hekou	2	shang	k ^w ɿæ	k ^w ɿa	koa	H	kwa
1035	嫠	止	之	來	kaikou	3	ping	li	lə	li	L	li
1036	孀	宕	陽	生	kaikou	3	ping	ʂianɿ	ʂianɿ	saɿ	L	saɿ
1037	翁	通	東	影	hekou	1	ping	ʔuɿ	ʔuɿ	oɿ	L	oɿ
1038	叟	流	侯	心	kaikou	1	shang	su	su	su	R	su
1039	耆	止	脂	群	kaikou	3A	ping	gi	gi	ki	L	ki
1040	老	效	豪	來	kaikou	1	shang	lau	lau	lo	R	lo
1041	婚	臻	魂	曉	hekou	1	ping	hɿon	hɿon	hon	L	hon
1042	姻	臻	真	影	kaikou	3A	ping	ʔin	ʔin	in	L	in
1043	嫁	假	麻	見	kaikou	2	qu	k ^y æ	k ^y a	ka	R	ka
1044	嫗	遇	虞	精	hekou	3	ping	tsiɿɔ	tsiɿɔ	ts ^h iui	L	tɕ ^h u
1045	精	梗	清	精	kaikou	3	ping	tsiɛɿ	tsiɛɿ	tsiəɿ	L	tɕɛɿ
1046	氣	止	微	溪	kaikou	3	qu	k ^h ii	k ^h əi	kii	H	ki
1047	孕	曾	蒸	以	kaikou	3	qu	jiɿ	jiəɿ	iɿ	R	iɿ
1048	毓	通	屋	以	hekou	3	ru	jiuk	jiuk	iuk	H	juk
1049	妊	深	侵	日	kaikou	3	qu	ɿim	ɿim	zim	R	im

1050	娠	臻	真	書	<i>kaikou</i>	3	<i>ping</i>	ɕin	ɕin	sin	L	sin
1051	婉	山	仙	明	<i>kaikou</i>	3B	<i>shang</i>	m ^y ien	m ^y ien	miən	H	mjaŋ
1052	產	山	山	生	<i>kaikou</i>	2	<i>shang</i>	ʂ ^y ɛn	ʂ ^y ɛn	san	R	san
1053	孿	山	刪	生	<i>hekou</i>	2	<i>qu</i>	ʂ ^{wy} æŋ	ʂ ^{wy} an	soan	H	swan
1054	穀	流	侯	泥	<i>kaikou</i>	1	<i>shang</i>	nu	nu	niu	R	nju
1055	鞠	通	屋	見	<i>hekou</i>	3	<i>ru</i>	kiuk	kiuk	kuk	H	kuk
1056	育	通	屋	以	<i>hekou</i>	3	<i>ru</i>	jiuk	jiuk	iuk	H	juk
1057	庠	宕	陽	邪	<i>kaikou</i>	3	<i>ping</i>	ziaŋ	ziaŋ	siaŋ	L	saŋ
1058	序	遇	魚	邪	<i>hekou</i>	3	<i>shang</i>	ziɤ	zio	siə	R	sʌ
1059	校	效	肴	見	<i>kaikou</i>	2	<i>qu</i>	k ^y æu	k ^y au	kio	R	kjo
1060	塾	通	屋	禪	<i>hekou</i>	3	<i>ru</i>	dziuk	dziuk	siuk	H	suk
1061	師	止	脂	生	<i>kaikou</i>	3	<i>ping</i>	ʂi	ʂi	sʌ	L	sa
1062	傳	遇	虞	非	<i>hekou</i>	3	<i>qu</i>	piɥo	piɥo	pu	R	pu
1063	生	梗	庚	生	<i>kaikou</i>	2	<i>ping</i>	ʂ ^y æŋ	ʂ ^y aŋ	sʌiŋ	L	sæŋ
1064	徒	遇	模	定	<i>hekou</i>	1	<i>ping</i>	dɥo	dɥo	to	L	to
1065	詩	止	之	書	<i>kaikou</i>	3	<i>ping</i>	ɕi	ɕə	si	L	si
1066	書	遇	魚	書	<i>hekou</i>	3	<i>ping</i>	ɕiɤ	ɕio	siə	L	sʌ
1067	易	梗	昔	以	<i>kaikou</i>	3	<i>ru</i>	jiɛk	jiɛk	iək	H	jaɿk
1068	禮	蟹	齊	來	<i>kaikou</i>	4	<i>shang</i>	lei	lei	liəi	H	lje
1069	科	果	戈	溪	<i>hekou</i>	1	<i>ping</i>	k ^{hw} a	k ^{hw} a	koa	L	kwa

1070	第	蟹	齊	定	<i>kaikou</i>	4	<i>qu</i>	<i>dei</i>	<i>dei</i>	<i>tiəi</i>	R	<i>tɕe</i>
1071	儁	臻	諄	精	<i>hekou</i>	3	<i>qu</i>	<i>ts^win</i>	<i>ts^win</i>	<i>tsiun</i>	R	<i>tɕun</i>
1072	儒	遇	虞	日	<i>hekou</i>	3	<i>ping</i>	<i>ɲiɤŋ</i>	<i>ɲiɤŋ</i>	<i>ziu</i>	L	<i>ju</i>
1073	章	宕	陽	章	<i>kaikou</i>	3	<i>ping</i>	<i>tɕiaŋ</i>	<i>tɕiaŋ</i>	<i>tsiaŋ</i>	L	<i>tɕaŋ</i>
1074	句	遇	虞	見	<i>hekou</i>	3	<i>qu</i>	<i>kiɤŋ</i>	<i>kiɤŋ</i>	<i>ku</i>	R	<i>ku</i>
1075	文	臻	文	微	<i>hekou</i>	3	<i>ping</i>	<i>miun</i>	<i>miun</i>	<i>mun</i>	L	<i>mun</i>
1076	字	止	之	從	<i>kaikou</i>	3	<i>qu</i>	<i>dzi</i>	<i>dzə</i>	<i>tsʌ</i>	H	<i>tɕa</i>
1077	典	山	先	端	<i>kaikou</i>	4	<i>shang</i>	<i>ten</i>	<i>ten</i>	<i>tiən</i>	R	<i>tɕʌn</i>
1078	籍	梗	昔	從	<i>kaikou</i>	3	<i>ru</i>	<i>dziɛk</i>	<i>dziek</i>	<i>tsiək</i>	H	<i>tɕʌk</i>
1079	經	梗	青	見	<i>kaikou</i>	4	<i>ping</i>	<i>keŋ</i>	<i>keŋ</i>	<i>kiəŋ</i>	L	<i>kjʌŋ</i>
1080	史	止	之	生	<i>kaikou</i>	3	<i>shang</i>	<i>ʂi</i>	<i>ʂə</i>	<i>sʌ</i>	R	<i>sa</i>
1081	冊	梗	麥	初	<i>kaikou</i>	2	<i>ru</i>	<i>tɕ^hɛk</i>	<i>tɕ^hɛk</i>	<i>ts^hʌik</i>	H	<i>tɕ^hæk</i>
1082	篇	山	仙	滂	<i>kaikou</i>	3A	<i>ping</i>	<i>p^hiɛn</i>	<i>p^hiɛn</i>	<i>p^hiən</i>	L	<i>p^hjʌn</i>
1083	卷	山	仙	見	<i>hekou</i>	3B	<i>qu</i>	<i>k^wɛiɛn</i>	<i>k^wɛiɛn</i>	<i>kuən</i>	R	<i>kwʌn</i>
1084	帙	臻	質	澄	<i>kaikou</i>	3	<i>ru</i>	<i>ɕit</i>	<i>ɕit</i>	<i>til</i>	H	<i>tɕeil</i>
1085	筆	臻	質	幫	<i>kaikou</i>	3B	<i>ru</i>	<i>p^ɥit</i>	<i>p^ɥit</i>	<i>p^hil</i>	H	<i>p^hil</i>
1086	墨	曾	德	明	<i>kaikou</i>	1	<i>ru</i>	<i>mək</i>	<i>mək</i>	<i>mik</i>	H	<i>muɤk</i>
1087	硯	山	先	疑	<i>kaikou</i>	4	<i>qu</i>	<i>ɲen</i>	<i>ɲen</i>	<i>iən</i>	H	<i>jʌn</i>
1088	紙	止	支	章	<i>kaikou</i>	3	<i>shang</i>	<i>tɕiɛ</i>	<i>tɕiɛ</i>	<i>tsi</i>	H	<i>tɕi</i>
1089	表	效	宵	幫	<i>kaikou</i>	3B	<i>shang</i>	<i>p^ɥiɛu</i>	<i>p^ɥiɛu</i>	<i>p^hio</i>	H	<i>p^hjo</i>

1090	箋	山	先	精	<i>kaikou</i>	4	<i>ping</i>	tsen	tsen	tsiən	L	tɕən
1091	命	梗	庚	明	<i>kaikou</i>	3	<i>qu</i>	miæŋ	mianŋ	miəŋ	R	mjɿŋ
1092	諭	遇	虞	以	<i>hekou</i>	3	<i>qu</i>	jiɿɔ	jiɿo	iu	R	ju
1093	詔	效	宵	章	<i>kaikou</i>	3	<i>qu</i>	tɕiɛu	tɕieu	tsio	R	tɕo
1094	敕	曾	職	徹	<i>kaikou</i>	3	<i>ru</i>	tʰik	tʰiək	tʰik	H	tɕʰik
1095	誥	效	豪	見	<i>kaikou</i>	1	<i>qu</i>	kau	kau	ko	R	ko
1096	旨	止	脂	章	<i>kaikou</i>	3	<i>shang</i>	tɕi	tɕi	tsi	H	tɕi
1097	榜	宕	唐	幫	<i>kaikou</i>	1	<i>shang</i>	paŋ	paŋ	paŋ	L	paŋ
1098	令	梗	清	來	<i>kaikou</i>	3	<i>qu</i>	liɛŋ	liɛŋ	liəŋ	H	ljɿŋ
1099	法	咸	乏	奉	<i>hekou</i>	3	<i>ru</i>	bɿiap	bɿiap	pəp	H	pɿp
1100	例	蟹	祭	來	<i>kaikou</i>	3	<i>qu</i>	liɛi	liei	liəi	R	lje
1101	符	遇	虞	奉	<i>hekou</i>	3	<i>ping</i>	biɿɔ	biɿo	pu	L	pu
1102	契	蟹	齊	溪	<i>kaikou</i>	4	<i>qu</i>	kʰei	kʰei	kiəi	R	kje
1103	印	臻	真	影	<i>kaikou</i>	3A	<i>qu</i>	ʔin	ʔin	in	H	in
1104	璽	止	支	心	<i>kaikou</i>	3	<i>shang</i>	siɛ	sie	sɿ	R	sa
1105	簡	山	山	見	<i>kaikou</i>	2	<i>shang</i>	kʷen	kʷen	kan	R	kan
1106	帖	咸	帖	透	<i>kaikou</i>	4	<i>ru</i>	tʰep	tʰep	tʰiəp	H	tɕʰɿp
1107	案	山	寒	影	<i>kaikou</i>	1	<i>qu</i>	ʔan	ʔan	an	R	an
1108	牘	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	H	tok
1109	疏	遇	魚	生	<i>hekou</i>	3	<i>qu</i>	ʃiɿ	ʃio	so	R	so

1110	劄	咸	洽	知	<i>kaikou</i>	2	<i>ru</i>	tʰɛp	tʰɛp	tsap	L	tɛap
1111	奏	流	侯	精	<i>kaikou</i>	1	<i>qu</i>	tsu	tsu	tsu	R	tɛu
1112	啓	蟹	齊	溪	<i>kaikou</i>	4	<i>shang</i>	kʰei	kʰei	kiəi	R	kje
1113	狀	宕	陽	崇	<i>kaikou</i>	3	<i>qu</i>	dzian	dzian	tsan	R	tɛan
1114	呈	梗	清	澄	<i>kaikou</i>	3	<i>ping</i>	dien	dien	tiən	L	tɛʌn
1115	牌	蟹	佳	並	<i>kaikou</i>	2	<i>ping</i>	bʰɛ	bʰe	pʰai	L	pʰæ
1116	引	臻	真	以	<i>kaikou</i>	3	<i>shang</i>	jin	jin	in	H	in
1117	簿	遇	模	並	<i>hekou</i>	1	<i>shang</i>	bʊo	bʊo	pu	H	pu
1118	牒	咸	帖	定	<i>kaikou</i>	4	<i>ru</i>	dep	dep	tʰəp	H	tɛʰʌp
1119	稟	效	豪	見	<i>kaikou</i>	1	<i>shang</i>	kau	kau	ko	R	ko
1120	批	蟹	齊	滂	<i>kaikou</i>	4	<i>ping</i>	pʰei	pʰei	pʰi	R	pʰi
1121	皇	宕	唐	匣	<i>hekou</i>	1	<i>ping</i>	hʷan	hʷan	hoan	L	hwan
1122	帝	蟹	齊	端	<i>kaikou</i>	4	<i>qu</i>	tei	tei	tiəi	R	tɛe
1123	君	臻	文	見	<i>hekou</i>	3	<i>ping</i>	kiun	kiun	kun	L	kun
1124	主	遇	虞	章	<i>hekou</i>	3	<i>shang</i>	teiʊo	teiʊo	tsiu	H	tɛu
1125	后	流	侯	匣	<i>kaikou</i>	1	<i>shang</i>	ɦu	ɦu	hu	R	hu
1126	妃	止	微	敷	<i>kaikou</i>	3	<i>ping</i>	pʰii	pʰəi	pi	L	pi
1127	嬪	臻	真	並	<i>kaikou</i>	3A	<i>ping</i>	bin	bin	piŋ	L	piŋ
1128	嬪	宕	陽	從	<i>kaikou</i>	3	<i>ping</i>	dzian	dzian	tsian	L	tɛan
1129	儲	遇	魚	澄	<i>hekou</i>	3	<i>ping</i>	dɿɿ	dɿo	tiə	L	tɛʌ

1130	副	流	尤	敷	<i>kaikou</i>	3	<i>qu</i>	p ^h iu	p ^h əu	pu	R	pu
1131	世	蟹	祭	書	<i>kaikou</i>	3	<i>qu</i>	ɕiei	ɕiei	siəi	R	se
1132	代	蟹	哈	定	<i>kaikou</i>	1	<i>shang</i>	dəi	dəi	tai	R	tæ
1133	邦	江	江	幫	<i>kaikou</i>	2	<i>ping</i>	pɔŋ	pɔŋ	paŋ	L	paŋ
1134	國	曾	德	見	<i>hekou</i>	1	<i>ru</i>	k ^w ək	k ^w ək	kuk	H	kuk
1135	辟	梗	昔	幫	<i>kaikou</i>	3A	<i>ru</i>	piək	piek	piək	H	pjɛk
1136	王	宕	陽	云	<i>hekou</i>	3	<i>ping</i>	f ^w iaŋ	f ^w iaŋ	oaŋ	L	waŋ
1137	公	通	東	見	<i>hekou</i>	1	<i>ping</i>	kuŋ	kuŋ	koŋ	L	koŋ
1138	侯	流	侯	匣	<i>kaikou</i>	1	<i>ping</i>	ɦu	ɦu	hu	L	hu
1139	宰	蟹	哈	精	<i>kaikou</i>	1	<i>shang</i>	tsəi	tsəi	tsai	R	tɛæ
1140	相	宕	陽	心	<i>kaikou</i>	3	<i>qu</i>	siaŋ	siaŋ	siaŋ	H	saŋ
1141	將	宕	陽	精	<i>kaikou</i>	3	<i>qu</i>	tsiaŋ	tsiaŋ	tsiaŋ	R	tɛaŋ
1142	帥	止	脂	生	<i>hekou</i>	3	<i>qu</i>	ɕwi	ɕwi	siu	H	su
1143	駙	遇	虞	奉	<i>hekou</i>	3	<i>qu</i>	biɤʊ	biɤʊ	pu	L	pu
1144	卿	梗	庚	溪	<i>kaikou</i>	3	<i>ping</i>	k ^h iæŋ	k ^h iaŋ	kiæŋ	L	kjɛŋ
1145	臣	臻	真	禪	<i>kaikou</i>	3	<i>ping</i>	dzin	dzin	sin	L	sin
1146	僚	效	蕭	來	<i>kaikou</i>	4	<i>ping</i>	leu	leu	lio	L	ljo
1147	員	山	仙	云	<i>hekou</i>	3B	<i>ping</i>	f ^w yiɛn	f ^w ien	uən	L	wɛn
1148	吏	止	之	來	<i>kaikou</i>	3	<i>qu</i>	li	lə	li	R	li
1149	士	止	之	崇	<i>kaikou</i>	3	<i>shang</i>	dzɿ	dzɿ	sɛ	R	sa

1150	隸	蟹	齊	來	<i>kaikou</i>	4	<i>qu</i>	<i>lei</i>	<i>lei</i>	<i>iəi</i>	R	<i>je</i>
1151	民	臻	真	明	<i>kaikou</i>	3A	<i>ping</i>	<i>min</i>	<i>min</i>	<i>min</i>	L	<i>min</i>
1152	氓	梗	耕	明	<i>kaikou</i>	2	<i>ping</i>	<i>m^ʷɛŋ</i>	<i>m^ʷɛŋ</i>	<i>mɿŋ</i>	L	<i>mæŋ</i>
1153	闍	咸	鹽	影	<i>kaikou</i>	3B	<i>shang</i>	<i>ʔ^ʷiɛm</i>	<i>ʔ^ʷiɛm</i>	<i>əm</i>	R	<i>ɿm</i>
1154	宦	山	刪	匣	<i>hekou</i>	2	<i>qu</i>	<i>ɸ^wæn</i>	<i>ɸ^wan</i>	<i>hoan</i>	R	<i>hwan</i>
1155	閭	臻	魂	曉	<i>hekou</i>	1	<i>ping</i>	<i>h_ʷon</i>	<i>h_ʷon</i>	<i>hon</i>	L	<i>hon</i>
1156	闍	止	之	禪	<i>kaikou</i>	3	<i>qu</i>	<i>dzɿ</i>	<i>dzə</i>	<i>si</i>	R	<i>si</i>
1157	卒	臻	沒	精	<i>hekou</i>	1	<i>ru</i>	<i>ts_ʷot</i>	<i>ts_ʷot</i>	<i>tsol</i>	H	<i>tɕol</i>
1158	伍	遇	模	疑	<i>hekou</i>	1	<i>shang</i>	<i>ŋ_ʷo</i>	<i>ŋ_ʷo</i>	<i>o</i>	R	<i>o</i>
1159	軍	臻	文	見	<i>hekou</i>	3	<i>ping</i>	<i>kiun</i>	<i>kiun</i>	<i>kun</i>	L	<i>kun</i>
1160	丁	梗	青	端	<i>kaikou</i>	4	<i>ping</i>	<i>teŋ</i>	<i>teŋ</i>	<i>tiəŋ</i>	L	<i>tɕəŋ</i>
1161	泅	流	尤	邪	<i>kaikou</i>	3	<i>ping</i>	<i>ziu</i>	<i>zəu</i>	<i>siu</i>	L	<i>su</i>
1162	迷	蟹	齊	明	<i>kaikou</i>	4	<i>ping</i>	<i>mei</i>	<i>mei</i>	<i>mi</i>	L	<i>mi</i>
1163	游	流	尤	以	<i>kaikou</i>	3	<i>ping</i>	<i>jiu</i>	<i>jəu</i>	<i>iu</i>	L	<i>ju</i>
1164	泳	梗	庚	云	<i>hekou</i>	3	<i>qu</i>	<i>ɸ^wiæŋ</i>	<i>ɸ^wiæŋ</i>	<i>iəŋ</i>	R	<i>jɿŋ</i>
1165	傭	通	鍾	以	<i>hekou</i>	3	<i>ping</i>	<i>ji_ʷoŋ</i>	<i>ji_ʷoŋ</i>	<i>ioŋ</i>	L	<i>joŋ</i>
1166	雇	遇	模	見	<i>hekou</i>	1	<i>qu</i>	<i>k_ʷo</i>	<i>k_ʷo</i>	<i>ko</i>	R	<i>ko</i>
1167	匠	宕	陽	從	<i>kaikou</i>	3	<i>qu</i>	<i>dziaŋ</i>	<i>dziaŋ</i>	<i>tsiaŋ</i>	H	<i>tɕæŋ</i>
1168	役	梗	昔	以	<i>hekou</i>	3	<i>ru</i>	<i>j^wiɛk</i>	<i>j^wiɛk</i>	<i>iək</i>	H	<i>jɿk</i>
1169	漁	遇	魚	疑	<i>hekou</i>	3	<i>ping</i>	<i>ŋiɿ</i>	<i>ŋio</i>	<i>ə</i>	L	<i>ɿ</i>

1170	獵	咸	葉	來	<i>kaikou</i>	3	<i>ru</i>	l ^y iɛp	l ^y iɛp	liəp	H	ljap
1171	算	山	桓	心	<i>hekou</i>	1	<i>qu</i>	s ^w an	s ^w an	san	H	san
1172	樵	效	宵	從	<i>kaikou</i>	3	<i>ping</i>	dziɛu	dzieu	ts ^h io	L	tɕ ^h o
1173	牧	通	屋	明	<i>hekou</i>	3	<i>ru</i>	miuk	miuk	mok	H	mok
1174	染	咸	鹽	日	<i>kaikou</i>	3	<i>shang</i>	ŋiɛm	ŋiem	ziəm	R	jɿəm
1175	畫	蟹	佳	匣	<i>hekou</i>	2	<i>qu</i>	ɦ ^w ɛ	ɦ ^w e	hoa	R	hwa
1176	曆	梗	錫	來	<i>kaikou</i>	4	<i>ru</i>	lek	lek	liək	H	ljɿk
1177	神	臻	真	船	<i>kaikou</i>	3	<i>ping</i>	zin	zin	sin	L	sin
1178	佛	臻	物	奉	<i>hekou</i>	3	<i>ru</i>	biut	biut	pul	H	pul
1179	鬼	止	微	見	<i>hekou</i>	3	<i>shang</i>	kii	kəi	kui	R	ky
1180	魔	果	戈	明	<i>hekou</i>	1	<i>ping</i>	m ^w a	m ^w a	ma	L	ma
1181	仙	山	仙	心	<i>kaikou</i>	3	<i>ping</i>	siɛn	sien	siən	L	sɿn
1182	道	效	豪	定	<i>kaikou</i>	1	<i>shang</i>	dau	dau	to	R	to
1183	尼	止	脂	娘	<i>kaikou</i>	3	<i>ping</i>	ŋi	ŋi	ni	L	ni
1184	僧	曾	登	心	<i>kaikou</i>	1	<i>ping</i>	səŋ	səŋ	siŋ	L	suŋ
1185	賓	臻	真	幫	<i>kaikou</i>	3A	<i>ping</i>	pin	pin	piŋ	L	pin
1186	客	梗	陌	溪	<i>kaikou</i>	2	<i>ru</i>	k ^h ɿæk	k ^h ɿak	kɿik	H	kæk
1188	旅	遇	魚	來	<i>hekou</i>	3	<i>shang</i>	liɿ	lio	liə	R	ljɿ
1189	羈	止	支	見	<i>kaikou</i>	3B	<i>ping</i>	k ^y iɛ	k ^y ie	kii	L	ki
1189	伴	山	桓	並	<i>hekou</i>	1	<i>shang</i>	b ^w an	b ^w an	pan	R	pan

1190	侶	遇	魚	來	hekou	3	shang	liɿ	lio	liə	R	ljʌ
1191	友	流	尤	云	kaikou	3	shang	fiu	fəu	u	R	u
1192	朋	曾	登	並	kaikou	1	ping	bəŋ	bəŋ	pɿŋ	L	puŋ
1193	娼	宕	陽	昌	kaikou	3	ping	tɕʰiaŋ	tɕʰiaŋ	tsʰiaŋ	L	tɕʰaŋ
1194	妓	止	支	群	kaikou	3B	shang	gʷiɛ	gʷiɛ	ki	R	ki
1195	術	宕	唐	匣	kaikou	1	ping	ɦaŋ	ɦaŋ	haŋ	L	haŋ
1196	衍	山	仙	云	hekou	3B	qu	ɸʷɿɛn	ɸʷɿɛn	uən	R	wʌn
1197	傀	蟹	灰	溪	hekou	1	shang	kʰwɔi	kʰwɔi	koi	R	kø
1198	儻	蟹	灰	來	hekou	1	shang	lʷɔi	lʷɔi	loi	R	lø
1199	優	流	尤	影	kaikou	3	ping	ʔiu	ʔəu	u	L	u
1200	伶	梗	青	來	kaikou	4	ping	leŋ	leŋ	liəŋ	L	ljʌŋ
1201	醫	止	之	影	kaikou	3	ping	ʔi	ʔə	ii	L	ui
1202	卜	通	屋	幫	hekou	1	ru	puk	puk	pok	H	pok
1203	呪	流	尤	章	kaikou	3	qu	tɕiu	tɕəu	tsʰiuk	H	tɕʰuk
1204	儻	蟹	泰	見	kaikou	1	qu	kai	kai	hoi	R	hø
1205	商	宕	陽	書	kaikou	3	ping	ɕiaŋ	ɕiaŋ	siaŋ	L	saŋ
1206	賈	遇	模	見	hekou	1	shang	kɿo	kɿo	ko	R	ko
1207	農	通	冬	泥	hekou	1	ping	nɿoŋ	nɿoŋ	noŋ	L	noŋ
1208	工	通	東	見	hekou	1	ping	kun	kun	koŋ	L	koŋ
1209	巫	遇	虞	微	hekou	3	ping	miɿo	miɿo	mu	L	mu

1210	覘	梗	錫	匣	<i>kaikou</i>	4	<i>ru</i>	fiək	fiək	hiək	H	hjaɿk
1211	媒	蟹	灰	明	<i>kaikou</i>	1	<i>ping</i>	moi	moi	maɿ	L	mæ
1212	灼	宕	藥	章	<i>kaikou</i>	3	<i>ru</i>	teiak	teiak	tsiak	H	teak
1213	瞽	遇	模	見	<i>hekou</i>	1	<i>shang</i>	kɿo	kɿo	ko	H	ko
1214	瞍	流	侯	心	<i>kaikou</i>	1	<i>shang</i>	su	su	su	R	su
1215	盲	梗	庚	明	<i>kaikou</i>	2	<i>ping</i>	m ^ʷ æŋ	m ^ʷ aŋ	maɿŋ	L	mæŋ
1216	矇	通	東	明	<i>hekou</i>	1	<i>ping</i>	muŋ	muŋ	moŋ	L	moŋ
1217	東	通	東	端	<i>hekou</i>	1	<i>ping</i>	tuŋ	tuŋ	toŋ	L	toŋ
1218	夷	止	脂	以	<i>kaikou</i>	3	<i>ping</i>	ji	ji	i	L	i
1219	西	蟹	齊	心	<i>kaikou</i>	4	<i>ping</i>	sei	sei	siə	L	sɿ
1220	戎	通	東	日	<i>hekou</i>	3	<i>ping</i>	ŋiun	ŋiun	ziun	L	juŋ
1221	南	咸	覃	泥	<i>kaikou</i>	1	<i>ping</i>	nəm	nəm	nam	L	nam
1222	蠻	山	刪	明	<i>kaikou</i>	2	<i>ping</i>	m ^ʷ æn	m ^ʷ an	man	L	man
1223	北	曾	德	幫	<i>kaikou</i>	1	<i>ru</i>	pək	pək	pik	H	puk
1224	狄	梗	錫	定	<i>kaikou</i>	4	<i>ru</i>	dek	dek	tiək	H	teɿk
1225	倭	果	戈	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w a	ʔ ^w a	oa	L	wa
1226	韃	山	曷	透	<i>kaikou</i>	1	<i>ru</i>	t ^h an	t ^h an	tal	H	tal
1227	羌	宕	陽	溪	<i>kaikou</i>	3	<i>ping</i>	k ^h iaŋ	k ^h iaŋ	kaŋ	L	kaŋ
1228	虜	遇	模	來	<i>hekou</i>	1	<i>shang</i>	lɿo	lɿo	lo	H	lo
1229	劫	咸	業	見	<i>kaikou</i>	3	<i>ru</i>	kiap	kiap	kəp	H	kaɿp

1230	盜	效	豪	定	<i>kaikou</i>	1	<i>qu</i>	dau	dau	to	R	to
1231	寇	流	侯	溪	<i>kaikou</i>	1	<i>qu</i>	k ^h u	k ^h u	ku	R	ku
1232	賊	曾	德	從	<i>kaikou</i>	1	<i>ru</i>	dzək	dzək	tsək	H	teʌk
1233	宮	通	東	見	<i>hekou</i>	3	<i>ping</i>	kiuŋ	kiuŋ	kuŋ	L	kuŋ
1234	闕	山	月	溪	<i>hekou</i>	3	<i>ru</i>	k ^h wiɿt	k ^h wiot	kuəl	H	kwəl
1235	宸	臻	真	禪	<i>kaikou</i>	3	<i>ping</i>	dzin	dzin	sin	L	sin
1236	殿	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	teʌn
1237	屋	通	屋	影	<i>hekou</i>	1	<i>ru</i>	ʔuk	ʔuk	ok	H	ok
1238	宅	梗	陌	澄	<i>kaikou</i>	2	<i>ru</i>	ɕ ^ʷ æk	ɕ ^ʷ ak	t ^h ʌik	H	t ^h æk
1239	家	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ æ	k ^ʷ a	ka	L	ka
1240	房	宕	陽	奉	<i>kaikou</i>	3	<i>ping</i>	bian	bian	paŋ	L	paŋ
1241	廳	梗	青	透	<i>kaikou</i>	4	<i>ping</i>	t ^h eŋ	t ^h eŋ	t ^h iəŋ	L	te ^h ʌŋ
1242	廨	蟹	佳	見	<i>kaikou</i>	2	<i>qu</i>	k ^ʷ ɛ	k ^ʷ e	hʌi	R	hæ
1243	廬	遇	魚	來	<i>hekou</i>	3	<i>ping</i>	liɿ	lio	liə	L	ljʌ
1244	舍	假	麻	書	<i>kaikou</i>	3	<i>qu</i>	ɕiæ	ɕia	sia	R	sa
1245	閨	蟹	齊	見	<i>hekou</i>	4	<i>ping</i>	k ^w ei	k ^w ei	kiu	L	kju
1246	閤	咸	合	見	<i>kaikou</i>	1	<i>ru</i>	kəp	kəp	hap	H	hap
1247	室	臻	質	書	<i>kaikou</i>	3	<i>ru</i>	ɕit	ɕit	sil	H	sil
1248	堂	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
1249	樓	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu

1250	閣	宕	鐸	見	<i>kaikou</i>	1	<i>ru</i>	kak	kak	kak	H	kak
1251	亭	梗	青	定	<i>kaikou</i>	4	<i>ping</i>	deŋ	deŋ	tiəŋ	L	teʌŋ
1252	臺	蟹	哈	定	<i>kaikou</i>	1	<i>ping</i>	dəi	dəi	tʌi	L	tæ
1253	闍	止	微	云	<i>hekou</i>	3	<i>ping</i>	ɦ ^w ii	ɦ ^w iəi	ui	L	y
1254	闍	山	曷	透	<i>kaikou</i>	1	<i>ru</i>	tʰan	tʰan	tal	H	tal
1255	廡	遇	虞	微	<i>hekou</i>	3	<i>shang</i>	miɤo	miɤo	mu	L	mu
1256	廊	宕	唐	來	<i>kaikou</i>	1	<i>ping</i>	laŋ	laŋ	laŋ	L	laŋ
1257	廈	假	麻	匣	<i>kaikou</i>	2	<i>shang</i>	ɦ ^ʷ æ	ɦ ^ʷ a	ha	R	ha
1258	寢	深	侵	清	<i>kaikou</i>	3	<i>shang</i>	tshim	tshim	tshim	R	teʰim
1259	埶	通	鍾	以	<i>hekou</i>	3	<i>shang</i>	jiɤoŋ	jiɤoŋ	ioŋ	R	joŋ
1260	陞	效	宵	章	<i>kaikou</i>	3	<i>qu</i>	teieʊ	teieʊ	tsio	R	teo
1261	廡	蟹	皆	莊	<i>kaikou</i>	2	<i>ping</i>	tɕ ^ʷ ei	tɕ ^ʷ ei	tsʌi	L	teæ
1262	院	山	仙	云	<i>hekou</i>	3B	<i>qu</i>	ɦ ^w ɿen	ɦ ^w ien	uən	R	wʌn
1263	廠	宕	陽	昌	<i>kaikou</i>	3	<i>shang</i>	teʰiaŋ	teʰiaŋ	tsʰiaŋ	R	teʰaŋ
1264	棚	梗	登	並	<i>kaikou</i>	1	<i>ping</i>	bəŋ	bəŋ	pɿŋ	L	puŋ
1265	軒	山	元	曉	<i>kaikou</i>	3	<i>ping</i>	hiɻn	hion	hən	L	hʌn
1266	檻	咸	銜	匣	<i>kaikou</i>	2	<i>shang</i>	ɦ ^ʷ æm	ɦ ^ʷ am	ham	R	ham
1267	欄	山	寒	來	<i>kaikou</i>	1	<i>ping</i>	lan	lan	lan	L	lan
1268	楯	臻	諄	船	<i>hekou</i>	3	<i>shang</i>	z ^w in	z ^w in	siun	R	sun
1269	户	遇	模	匣	<i>hekou</i>	1	<i>shang</i>	ɦɤo	ɦɤo	ho	R	ho

1270	牖	流	尤	以	<i>kaikou</i>	3	<i>shang</i>	jiu	jəu	iu	R	ju
1271	窗	江	江	初	<i>kaikou</i>	2	<i>ping</i>	tɕʰoŋ	tɕʰoŋ	tsʰaŋ	L	tɕʰaŋ
1272	櫺	梗	青	來	<i>kaikou</i>	4	<i>ping</i>	leŋ	leŋ	liəŋ	L	ljʌŋ
1273	壁	梗	錫	幫	<i>kaikou</i>	4	<i>ru</i>	pek	pek	piək	H	pjʌk
1274	墉	通	鍾	以	<i>hekou</i>	3	<i>ping</i>	jiuŋ	jiuŋ	ioŋ	L	joŋ
1275	垣	山	元	云	<i>hekou</i>	3	<i>ping</i>	ɦwɪɳ	ɦwɪon	uən	L	wʌɳ
1276	墻	宕	陽	從	<i>kaikou</i>	3	<i>ping</i>	dziaŋ	dziaŋ	tsiaŋ	L	teəŋ
1277	桁	梗	庚	匣	<i>kaikou</i>	2	<i>ping</i>	ɦvæŋ	ɦvʌŋ	hʌiŋ	L	hæŋ
1278	櫟	深	侵	來	<i>kaikou</i>	3	<i>shang</i>	lim	lim	lim	R	lum
1279	簷	咸	鹽	以	<i>kaikou</i>	3	<i>ping</i>	jiem	jiem	tsʰiəm	L	tɕʰʌm
1280	薨	梗	耕	明	<i>kaikou</i>	2	<i>ping</i>	mʷeŋ	mʷeŋ	mʌiŋ	L	mæŋ
1281	溝	流	侯	見	<i>kaikou</i>	1	<i>ping</i>	ku	ku	ku	L	ku
1282	渠	遇	魚	群	<i>hekou</i>	3	<i>ping</i>	giɤ	gio	kə	L	kʌ
1283	瀆	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	L	tok
1284	竇	流	侯	定	<i>kaikou</i>	1	<i>qu</i>	du	du	tu	H	tu
1285	廁	止	之	初	<i>kaikou</i>	3	<i>qu</i>	tɕʰi	tɕʰə	tsʰi ³⁷⁷	H	tɕʰuɤk
1286	廡	流	侯	定	<i>kaikou</i>	1	<i>ping</i>	du	du	tʰu	L	tʰu
1287	囟	臻	魂	匣	<i>hekou</i>	1	<i>qu</i>	ɦuon	ɦuon	hon	R	hon

³⁷⁷Also [tsʰik](H tone)(曾 職 初 開 3 入 [tɕʰik] [tɕʰiək] [tɕʰik])

1288	圍	梗	清	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iɛŋ	ts ^h iɛŋ	ts ^h iəŋ	L	tɕ ^h ɿŋ
1289	膊	宕	鐸	幫	<i>kaikou</i>	1	<i>ru</i>	pak	pak	pak	H	pak
1290	櫛	通	東	來	<i>hekou</i>	1	<i>ping</i>	luŋ	luŋ	loŋ	L	loŋ
1291	桎	蟹	齊	並	<i>kaikou</i>	4	<i>shang</i>	bei	bei	p ^h iəi	R	p ^h je
1292	栢	遇	模	匣	<i>hekou</i>	1	<i>qu</i>	ɦuɔ	ɦuɔ	ho	R	ho
1293	陞	蟹	齊	並	<i>kaikou</i>	4	<i>shang</i>	bei	bei	p ^h iəi	R	p ^h je
1294	墀	止	脂	澄	<i>kaikou</i>	3	<i>ping</i>	ɕi	ɕi	ti	L	tei
1295	階	蟹	皆	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ ɛi	k ^ʷ ɛi	kiəi	L	kje
1296	庭	梗	青	定	<i>kaikou</i>	4	<i>ping</i>	deŋ	deŋ	tiəŋ	L	tɕɿŋ
1297	棟	通	東	端	<i>hekou</i>	1	<i>qu</i>	tuŋ	tuŋ	toŋ	R	toŋ
1298	櫟	宕	陽	來	<i>kaikou</i>	3	<i>ping</i>	liəŋ	liəŋ	liəŋ	L	ljaŋ
1299	楹	梗	清	以	<i>kaikou</i>	3	<i>ping</i>	jiɛŋ	jiɛŋ	iəŋ	L	jaŋ
1300	柱	遇	虞	澄	<i>hekou</i>	3	<i>shang</i>	ɕiɥɔ	ɕiɥɔ	tiu	R	tɕeu
1301	稅	山	薛	章	<i>hekou</i>	3	<i>ru</i>	tɕ ^w iɛt	tɕ ^w iɛt	tsiəl	H	tɕɿl
1302	椽	山	仙	澄	<i>hekou</i>	3	<i>ping</i>	ɕ ^w iɛn	ɕ ^w iɛn	iən	L	jaŋ
1303	桷	江	覺	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʷ ɔk	k ^ʷ ɔk	kak	H	kak
1304	榱	止	脂	生	<i>hekou</i>	3	<i>ping</i>	ʂwi	ʂwi	ts ^h oi	L	tɕ ^h ø
1305	礎	遇	魚	初	<i>hekou</i>	3	<i>shang</i>	tɕ ^h iɻ	tɕ ^h io	ts ^h o	H	tɕ ^h o
1306	礫	宕	唐	心	<i>kaikou</i>	1	<i>shang</i>	saŋ	saŋ	saŋ	H	saŋ
1307	礪	臻	質	章	<i>kaikou</i>	3	<i>ru</i>	teit	teit	tsil	H	teil

1308	碣	梗	昔	心	<i>kaikou</i>	3	<i>ru</i>	<i>siək</i>	<i>siek</i>	<i>siək</i>	H	<i>sək</i>
1309	藩	山	元	非	<i>hekou</i>	3	<i>ping</i>	<i>pʷiɤn</i>	<i>pʷion</i>	<i>pən</i>	L	<i>pɔn</i>
1310	柵	梗	陌	初	<i>kaikou</i>	2	<i>ru</i>	<i>tɕʰɿək</i>	<i>tɕʰɿək</i>	<i>tsʰɿək</i>	L	<i>tɕʰək</i>
1311	筩	假	麻	幫	<i>kaikou</i>	2	<i>ping</i>	<i>pʷɐ</i>	<i>pʷa</i>	<i>pʰa</i>	L	<i>pʰa</i>
1312	籬	止	支	來	<i>kaikou</i>	3	<i>ping</i>	<i>liɛ</i>	<i>lie</i>	<i>li</i>	L	<i>li</i>
1313	門	臻	魂	明	<i>hekou</i>	1	<i>ping</i>	<i>mɯon</i>	<i>mɯon</i>	<i>mun</i>	L	<i>mun</i>
1314	扉	止	微	非	<i>kaikou</i>	3	<i>ping</i>	<i>pʰi</i>	<i>pʰi</i>	<i>pi</i>	L	<i>pi</i>
1315	椶	蟹	灰	影	<i>hekou</i>	1	<i>ping</i>	<i>ʔʷoi</i>	<i>ʔʷoi</i>	<i>oi</i>	L	<i>ø</i>
1316	樞	遇	虞	昌	<i>hekou</i>	3	<i>ping</i>	<i>tɕʰiɯo</i>	<i>tɕʰiɯo</i>	<i>tsʰiui</i>	L	<i>tɕʰu</i>
1317	扃	梗	青	見	<i>hekou</i>	4	<i>ping</i>	<i>keŋ</i>	<i>keŋ</i>	<i>kiəŋ</i>	L	<i>kjɔŋ</i>
1318	櫨	山	刪	生	<i>hekou</i>	2	<i>ping</i>	<i>ɕʷɐn</i>	<i>ɕʷan</i>	<i>soan</i>	L	<i>swan</i>
1319	戾	咸	鹽	以	<i>kaikou</i>	3	<i>shang</i>	<i>jiɛm</i>	<i>jiɛm</i>	<i>iɛm</i>	L	<i>jɔm</i>
1320	彥	止	支	以	<i>kaikou</i>	3	<i>ping</i>	<i>jiɛ</i>	<i>jie</i>	<i>i</i>	L	<i>i</i>
1321	閨	宕	陽	溪	<i>hekou</i>	3	<i>ping</i>	<i>kʰwɿəŋ</i>	<i>kʰwɿəŋ</i>	<i>koəŋ</i>	L	<i>kwaŋ</i>
1322	闌	山	薛	疑	<i>kaikou</i>	3B	<i>ru</i>	<i>ŋʷiɛt</i>	<i>ŋʷiɛt</i>	<i>əl</i>	H	<i>ɔl</i>
1323	閩	臻	魂	溪	<i>hekou</i>	1	<i>shang</i>	<i>kʰɯon</i>	<i>kʰɯon</i>	<i>kon</i>	R	<i>kon</i>
1324	閩	曾	職	曉	<i>hekou</i>	3	<i>ru</i>	<i>hʷik</i>	<i>hʷiək</i>	<i>iək</i>	H	<i>jɔk</i>
1325	橋	效	宵	群	<i>kaikou</i>	3B	<i>ping</i>	<i>gʷiɛu</i>	<i>gʷiɛu</i>	<i>kio</i>	L	<i>kjo</i>
1326	梯	蟹	齊	透	<i>kaikou</i>	4	<i>ping</i>	<i>tʰei</i>	<i>tʰei</i>	<i>tiəi</i>	L	<i>tɕe</i>
1327	缸	江	江	見	<i>kaikou</i>	2	<i>ping</i>	<i>kɔŋ</i>	<i>koŋ</i>	<i>kaŋ</i>	L	<i>kaŋ</i>

1328	倚	止	支	見	<i>kaikou</i>	3B	<i>qu</i>	k ^ʷ iɛ	k ^ʷ ie	kii	L	ki
1329	朝	效	宵	澄	<i>kaikou</i>	3	<i>ping</i>	ɕiɛu	ɕieu	tio	L	tɕo
1330	廷	梗	青	定	<i>kaikou</i>	4	<i>ping</i>	deŋ	deŋ	tiəŋ	L	tɕəŋ
1331	京	梗	庚	見	<i>kaikou</i>	3	<i>ping</i>	kiæŋ	kiaŋ	kiəŋ	L	kjʌŋ
1332	都	遇	模	端	<i>hekou</i>	1	<i>ping</i>	tɯo	tɯo	to	L	to
1333	邊	山	先	幫	<i>kaikou</i>	4	<i>ping</i>	pen	pen	piən	L	pjʌn
1334	鄙	止	脂	幫	<i>kaikou</i>	3B	<i>shang</i>	p ^ʷ i	p ^ʷ i	pi	R	pi
1335	寰	山	刪	匣	<i>hekou</i>	2	<i>ping</i>	ɦ ^w æn	ɦ ^w an	hoan	L	hwan
1336	畿	止	微	群	<i>kaikou</i>	3	<i>ping</i>	gi	gəi	kii	L	ki
1337	部	流	侯	並	<i>kaikou</i>	1	<i>shang</i>	bu	bu	pu	H	pu
1338	署	遇	魚	禪	<i>hekou</i>	3	<i>qu</i>	dzɪɾ	dzio	siə	R	sʌ
1339	曹	效	豪	從	<i>kaikou</i>	1	<i>ping</i>	dzau	dzau	tso	L	tɕo
1340	局	通	燭	群	<i>hekou</i>	3	<i>ru</i>	giɯɔk	giɯok	kuk	H	kuk
1341	官	山	桓	見	<i>hekou</i>	1	<i>ping</i>	k ^w an	k ^w an	koan	L	kwan
1342	府	遇	虞	非	<i>hekou</i>	3	<i>shang</i>	piɯɔ	piɯo	pu	H	pu
1343	衙	假	麻	疑	<i>kaikou</i>	2	<i>ping</i>	ŋ ^ʷ æ	ŋ ^ʷ a	a	L	a
1344	司	止	之	心	<i>kaikou</i>	3	<i>ping</i>	si	sə	sʌ	L	sa
1345	州	流	尤	章	<i>kaikou</i>	3	<i>ping</i>	ɕiu	ɕəu	tsiu	H	tɕu
1346	郡	臻	文	群	<i>hekou</i>	3	<i>qu</i>	giun	giun	kun	R	kun
1347	縣	山	先	匣	<i>kaikou</i>	4	<i>qu</i>	ɦien	ɦien	hiən	R	hjʌn

1348	邑	深	緝	影	<i>kaikou</i>	3B	<i>ru</i>	ʔ ^y ip	ʔ ^y ip	ip	H	uɿp
1349	衛	蟹	祭	云	<i>hekou</i>	3	<i>qu</i>	ɦ ^w iɛi	ɦ ^w iei	ui	H	y
1350	所	遇	魚	生	<i>hekou</i>	3	<i>shang</i>	ʂɿɤ	ʂio	so	H	so
1351	營	梗	清	以	<i>hekou</i>	3	<i>ping</i>	j ^w iɛŋ	j ^w ieŋ	iəŋ	L	jʌŋ
1352	廂	宕	陽	心	<i>kaikou</i>	3	<i>ping</i>	siaŋ	siaŋ	siaŋ	L	saŋ
1353	邸	蟹	齊	端	<i>kaikou</i>	4	<i>shang</i>	tei	tei	tiəi	R	tɕe
1354	店	咸	添	端	<i>kaikou</i>	4	<i>qu</i>	tem	tem	tiəm	H	tɕɛm
1355	埠	遇	模	並	<i>hekou</i>	1	<i>qu</i>	bɯo	bɯo	pu	R	pu
1356	集	深	緝	從	<i>kaikou</i>	3	<i>ru</i>	dzip	dzip	tsip	H	tɕip
1357	街	蟹	佳	見	<i>kaikou</i>	2	<i>ping</i>	k ^y ɛ	k ^y e	kai	L	kæ
1358	市	止	之	禪	<i>kaikou</i>	3	<i>shang</i>	dzi	dzə	si	R	si
1359	塵	山	仙	澄	<i>kaikou</i>	3	<i>ping</i>	dʑien	dʑien	tiən	L	tɕɛn
1360	行	宕	唐	匣	<i>kaikou</i>	1	<i>ping</i>	ɦaŋ	ɦaŋ	haŋ	L	haŋ
1361	屯	臻	魂	定	<i>hekou</i>	1	<i>ping</i>	dɯon	dɯon	tun	L	tun
1362	堡	效	豪	幫	<i>kaikou</i>	1	<i>shang</i>	pau	pau	po	R	po
1363	壕	效	豪	匣	<i>kaikou</i>	1	<i>ping</i>	ɦau	ɦau	ho	L	ho
1364	池	止	支	澄	<i>kaikou</i>	3	<i>ping</i>	dʑiɛ	dʑiɛ	ti	L	tɕei
1365	郭	遇	虞	敷	<i>hekou</i>	3	<i>ping</i>	p ^h iɯo	p ^h iɯo	pu	L	pu
1366	郭	宕	鐸	見	<i>hekou</i>	1	<i>ru</i>	k ^w ak	k ^w ak	koak	H	kwak
1367	城	梗	清	禪	<i>kaikou</i>	3	<i>ping</i>	dziɛŋ	dziɛŋ	siəŋ	L	sʌŋ

1368	隍	宕	唐	匣	hekou	1	ping	ɦ ^w aŋ	ɦ ^w aŋ	hoaŋ	L	hwaŋ
1369	間	遇	魚	來	hekou	3	ping	liɤ	lio	liə	L	ljʌ
1370	間	咸	鹽	以	kaikou	3	ping	jiem	jiem	iəm	L	jʌm
1371	鄰	臻	真	來	kaikou	3	ping	lin	lin	lin	L	lin
1372	里	止	之	來	kaikou	3	shang	li	lə	li	R	li
1373	寨	蟹	夬	崇	kaikou	2	qu	dz ^ʷ æi	dz ^ʷ ai	ts ^h ai	H	tɕ ^h æ
1374	墅	遇	魚	禪	hekou	3	shang	dzɪɤ	dzio	siə	R	sʌ
1375	村	臻	魂	清	hekou	1	ping	ts ^h ɥon	ts ^h ɥon	ts ^h on	L	tɕ ^h on
1376	鄉	宕	陽	曉	kaikou	3	ping	hiaŋ	hiaŋ	hiaŋ	L	hjaŋ
1377	墩	臻	魂	端	hekou	1	ping	tɥon	tɥon	ton	L	ton
1378	埃	流	侯	匣	kaikou	1	qu	ɦu	ɦu	hu	R	hu
1379	烽	通	鍾	敷	hekou	3	ping	p ^h iɥoŋ	p ^h iɥoŋ	poŋ	L	poŋ
1380	燧	止	脂	邪	hekou	3	qu	z ^w i	z ^w i	siu	H	su
1381	館	山	桓	見	hekou	1	qu	k ^w an	k ^w an	koan	H	kwan
1382	驛	梗	昔	以	kaikou	3	ru	jiɛk	jiɛk	iək	H	jʌk
1383	站	咸	咸	知	kaikou	2	qu	t ^ʷ ɛm	t ^ʷ ɛm	ts ^h am	R	tɕ ^h am
1384	鋪	遇	模	滂	hekou	1	qu	p ^h ɥo	p ^h ɥo	p ^h u	H	p ^h o
1385	倉	宕	唐	清	kaikou	1	ping	ts ^h aŋ	ts ^h aŋ	ts ^h aŋ	L	tɕ ^h aŋ
1386	廐	效	豪	疑	kaikou	1	ping	ŋau	ŋau	o	L	o
1387	圉	臻	魂	定	hekou	1	shang	dɥon	dɥon	ton	R	ton

1388	筭	山	仙	禪	hekou	3	ping	dz ^w iɛn	dz ^w ien	ts ^h iən	R	tɕ ^h ʌn
1389	困	臻	諄	溪	hekou	3B	ping	k ^{hw} ɿn	k ^{hw} ɿn	kiun	R	kjun
1390	廩	深	侵	來	kaikou	3	shang	lim	lim	lim	R	luum
1391	帑	宕	唐	透	kaikou	1	shang	t ^h aŋ	t ^h aŋ	t ^h aŋ	R	t ^h aŋ
1392	庫	遇	模	溪	hekou	1	qu	k ^h ɤo	k ^h ɤo	ko	L	ko
1393	牢	效	豪	來	kaikou	1	ping	lau	lau	loi	L	lø
1394	獄	通	燭	疑	hekou	3	ru	ŋiɤok	ŋiɤok	ok	L	ok
1395	囹	梗	青	來	kaikou	4	ping	leŋ	leŋ	liəŋ	L	ljʌŋ
1396	圉	遇	魚	疑	hekou	3	shang	ŋiɿ	ŋio	ə	R	ʌ
1397	審	深	侵	影	kaikou	3B	qu	ʔ ^ɿ im	ʔ ^ɿ im	im	L	uum
1398	窩	果	戈	影	hekou	1	ping	ʔ ^{wa} a	ʔ ^{wa} a	oa	L	wa
1399	穿	梗	清	從	kaikou	3	shang	dziɛŋ	dziɛŋ	tsiəŋ	R	tɕɛʌŋ
1400	窖	效	肴	見	kaikou	2	qu	k ^ɥ æu	k ^ɥ au	kio	R	kjo
1401	陶	效	豪	定	kaikou	1	ping	dau	dau	to	L	to
1402	窑	效	宵	以	kaikou	3	ping	jiɛu	jieu	io	L	jo
1403	囟	通	東	清	hekou	1	ping	ts ^h uŋ	ts ^h uŋ	ts ^h oŋ	L	tɕ ^h oŋ
1404	埃	臻	沒	定	hekou	1	ru	dɤot	dɤot	tol	R	tol
1405	庖	效	肴	並	kaikou	2	ping	b ^ɥ æu	b ^ɥ au	p ^h o	L	p ^h o
1406	廚	遇	虞	澄	hekou	3	ping	ɕiɤo	ɕiɤo	tiu	L	tɕeu
1407	炕	宕	唐	溪	kaikou	1	qu	k ^h aŋ	k ^h aŋ	kaŋ	R	kaŋ

1408	竈	效	豪	精	<i>kaikou</i>	1	<i>qu</i>	tsau	tsau	tso	R	tɕo
1409	庵	咸	覃	影	<i>kaikou</i>	1	<i>ping</i>	ʔəm	ʔəm	am	L	am
1410	觀	山	桓	見	<i>hekou</i>	1	<i>qu</i>	kʷan	kʷan	koan	H	kwan
1411	寺	止	之	邪	<i>kaikou</i>	3	<i>qu</i>	zi	zə	sʌ	R	sa
1412	刹	山	鎋	初	<i>kaikou</i>	2	<i>ru</i>	tɕʰyæn	tɕʰyan	tsʰal	H	tɕʰal
1413	祠	止	之	邪	<i>kaikou</i>	3	<i>ping</i>	zi	zə	sʌ	L	sa
1414	廟	效	宵	明	<i>kaikou</i>	3B	<i>qu</i>	mʷiɐu	mʷieu	mio	R	mjo
1415	壇	山	寒	定	<i>kaikou</i>	1	<i>ping</i>	dan	dan	tan	L	tan
1416	墳	止	脂	以	<i>hekou</i>	3	<i>shang</i>	jʷi	jʷi	iu	R	ju
1417	鼎	梗	青	端	<i>kaikou</i>	4	<i>shang</i>	teŋ	teŋ	tiəŋ	R	tɕəŋ
1418	鑊	宕	鐸	匣	<i>hekou</i>	1	<i>ru</i>	ɦʷak	ɦʷak	hoak	H	hwak
1419	鼃	蟹	哈	泥	<i>kaikou</i>	1	<i>shang</i>	nəi	nəi	nai	R	næ
1420	鼃	止	之	精	<i>kaikou</i>	3	<i>ping</i>	tsi	tsə	tsʌ	L	tɕa
1421	釜	遇	虞	奉	<i>hekou</i>	3	<i>shang</i>	biɤʊ	biɤo	pu	R	pu
1422	鍋	果	戈	見	<i>hekou</i>	1	<i>ping</i>	kʷa	kʷa	koa	L	kwa
1423	鬻	深	侵	邪	<i>kaikou</i>	3	<i>ping</i>	zim	zim	sim	L	sim
1424	錡	止	支	群	<i>kaikou</i>	3B	<i>shang</i>	gʷiɛ	gʷie	kii	R	ki
1425	櫃	止	脂	群	<i>hekou</i>	3B	<i>qu</i>	gʷyɪ	gʷyi	kuəi	R	kwe
1426	櫝	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	H	tok
1427	度	止	支	見	<i>hekou</i>	3B	<i>shang</i>	kʷyɛ	kʷye	ki	R	ki

1428	机	止	脂	見	<i>kaikou</i>	3B	<i>shang</i>	k ^ʷ i	k ^ʷ i	kuəi	R	kwe
1429	牀	宕	陽	崇	<i>kaikou</i>	3	<i>ping</i>	dzian	dzian	saŋ	L	saŋ
1430	榻	咸	盍	透	<i>kaikou</i>	1	<i>ru</i>	tʰap	tʰap	tʰap	H	tʰap
1431	凳	曾	登	端	<i>kaikou</i>	1	<i>qu</i>	təŋ	təŋ	tiŋ	R	tuŋ
1432	椅	止	支	影	<i>kaikou</i>	3B	<i>shang</i>	ʔ ^ʷ iɛ	ʔ ^ʷ ie	ii	R	ui
1433	卓	江	覺	知	<i>kaikou</i>	2	<i>ru</i>	tʰɔk	tʰok	tʰak	H	tʰak
1434	盤	山	桓	並	<i>hekou</i>	1	<i>ping</i>	b ^ʷ an	b ^ʷ an	pan	L	pan
1435	榼	咸	盍	溪	<i>kaikou</i>	1	<i>ru</i>	kʰap	kʰap	hap	H	hap
1436	鏊	效	豪	疑	<i>kaikou</i>	1	<i>qu</i>	ŋau	ŋau	o	R	o
1437	筵	止	支	生	<i>kaikou</i>	3	<i>ping</i>	ʂiɛ	ʂie	sii	L	sui
1438	籬	果	歌	來	<i>kaikou</i>	1	<i>ping</i>	la	la	la	L	la
1439	甌	曾	蒸	精	<i>kaikou</i>	3	<i>qu</i>	tsiŋ	tsiəŋ	tsiŋ	R	tɕuŋ
1440	算	蟹	齊	幫	<i>kaikou</i>	4	<i>qu</i>	pei	pei	pi	R	pʰje
1441	盃	山	桓	影	<i>hekou</i>	1	<i>shang</i>	ʔ ^ʷ an	ʔ ^ʷ an	uən	R	wan
1442	櫟	咸	帖	定	<i>kaikou</i>	4	<i>ru</i>	dep	dep	tiəp	H	tɕəp
1443	簞	山	寒	端	<i>kaikou</i>	1	<i>ping</i>	tan	tan	tan	L	tan
1444	箕	止	之	見	<i>kaikou</i>	3	<i>ping</i>	ki	kə	kii	L	ki
1445	匕	止	脂	幫	<i>kaikou</i>	3A	<i>shang</i>	pi	pi	pi	R	pi
1446	匙	止	支	禪	<i>kaikou</i>	3	<i>ping</i>	dziɛ	dzie	si	L	si
1447	筴	咸	帖	見	<i>kaikou</i>	4	<i>ru</i>	kep	kep	hiəp	H	hjaɸ

1448	筴	遇	魚	澄	<i>hekou</i>	3	<i>qu</i>	d̪iɻ	d̪io	tiə	R	tɕʌ
1449	研	假	麻	疑	<i>kaikou</i>	2	<i>qu</i>	ŋʲæ	ŋʲa	a	R	a
1450	碾	山	仙	娘	<i>kaikou</i>	3	<i>qu</i>	ŋien	ŋien	niən	R	ɲʌn
1451	磨	果	戈	明	<i>hekou</i>	1	<i>qu</i>	mʷa	mʷa	ma	R	ma
1452	磴	蟹	灰	疑	<i>hekou</i>	1	<i>qu</i>	ŋʷoi	ŋʷoi	ii	R	æ
1453	碓	蟹	灰	端	<i>hekou</i>	1	<i>qu</i>	tʷoi	tʷoi	tʌi	R	tæ
1454	臼	流	尤	群	<i>kaikou</i>	3	<i>shang</i>	giu	gəu	ku	H	ku
1455	砧	深	侵	知	<i>kaikou</i>	3	<i>ping</i>	t̪im	t̪im	tʰim	L	tɕʰim
1456	杵	遇	魚	昌	<i>hekou</i>	3	<i>shang</i>	tɕʰiɻ	tɕʰio	tsiə	R	tɕʌ
1457	筵	山	仙	以	<i>kaikou</i>	3	<i>ping</i>	jiɛn	jien	iən	L	ʝʌn
1458	席	梗	昔	邪	<i>kaikou</i>	3	<i>ru</i>	ziɛk	ziek	siək	H	sʌk
1459	茵	臻	真	影	<i>kaikou</i>	3A	<i>ping</i>	ʔin	ʔin	in	L	in
1460	薦	山	先	精	<i>kaikou</i>	4	<i>qu</i>	tsen	tsen	tsʰiən	R	tɕʰʌn
1461	兀	臻	沒	疑	<i>hekou</i>	1	<i>ru</i>	ŋuot	ŋuot	ol	H	ol
1462	簞	咸	添	定	<i>kaikou</i>	4	<i>shang</i>	dem	dem	tiəm	R	tɕʌm
1463	枕	深	侵	章	<i>kaikou</i>	3	<i>shang</i>	tɕeim	tɕeim	tsʰim	R	tɕʰim
1464	褥	通	燭	日	<i>hekou</i>	3	<i>ru</i>	ŋiɹok	ŋiɹok	ziok	H	jok
1465	秤	曾	蒸	昌	<i>kaikou</i>	3	<i>qu</i>	tɕʰiŋ	tɕʰiəŋ	tsʰiŋ	R	tɕʰuŋ
1466	衡	梗	庚	匣	<i>kaikou</i>	2	<i>ping</i>	ɦʲæŋ	ɦʲaŋ	hiəŋ	L	ɦʝʌŋ
1467	鍾	止	支	澄	<i>hekou</i>	3	<i>ping</i>	d̪ʷiɛ	d̪ʷie	tʰiu	H	tɕʰu

1468	權	山	仙	群	hekou	3B	ping	g ^w ɿɛn	g ^w ɿɛn	kuən	L	kwʌn
1469	升	曾	蒸	書	kaikou	3	ping	ɕiŋ	ɕiəŋ	siŋ	L	suŋ
1470	斗	流	侯	端	kaikou	1	shang	tu	tu	tu	H	tu
1471	概	蟹	哈	見	kaikou	1	shang	kəi	kəi	kai	R	kæ
1472	斛	通	屋	匣	hekou	1	ru	ɦuk	ɦuk	kok	H	kok
1473	糴	宕	陽	群	kaikou	3	qu	giaŋ	giaŋ	kaŋ	H	kaŋ
1474	糊	遇	模	匣	hekou	1	ping	ɦʊo	ɦʊo	ho	L	ho
1475	膠	效	肴	見	kaikou	2	ping	k ^ʷ æu	k ^ʷ au	kio	L	kjo
1476	蠟	咸	盍	來	kaikou	1	ru	lap	lap	lap	H	lap
1477	樞	流	尤	奉	kaikou	3	ping	biu	biəu	pu	L	pu
1478	秘	臻	質	並	kaikou	3A	ru	bit	bit	p ^h il	H	p ^h il
1479	柄	梗	庚	幫	kaikou	3	qu	piæŋ	piaŋ	piəŋ	R	pjʌŋ
1480	櫛	假	麻	幫	kaikou	2	qu	p ^ʷ æ	p ^ʷ a	p ^h a	R	p ^h a
1481	樽	臻	魂	精	hekou	1	ping	tsʊon	tsʊon	tsun	L	teun
1482	壘	蟹	灰	來	hekou	1	ping	l ^w oi	l ^w oi	loi	L	lø
1483	鎗	梗	庚	初	kaikou	2	ping	tɕ ^h ɿæŋ	tɕ ^h ɿəŋ	t ^h ʌiŋ	L	taŋ, tsæŋ
1484	銚	效	蕭	定	kaikou	4	qu	deu	deu	tio	R	tɕo
1485	壺	遇	模	匣	hekou	1	ping	ɦʊo	ɦʊo	ho	L	ho
1486	瓶	梗	青	並	kaikou	4	ping	beŋ	beŋ	piəŋ	L	pjʌŋ
1487	勺	宕	藥	章	kaikou	3	ru	teiak	teiak	tsiak	H	teak

1488	罌	假	麻	見	<i>kaikou</i>	2	<i>shang</i>	k ^y æ	k ^y a	ka	R	ka
1489	罌	咸	覃	定	<i>kaikou</i>	1	<i>ping</i>	dəm	dəm	tam	L	tam
1490	罐	山	桓	見	<i>hekou</i>	1	<i>qu</i>	k ^w an	k ^w an	koan	R	kwan
1491	盆	臻	魂	並	<i>hekou</i>	1	<i>ping</i>	b ^u on	b ^u on	pun	L	pun
1492	盎	宕	唐	影	<i>kaikou</i>	1	<i>qu</i>	ʔaŋ	ʔaŋ	aŋ	R	aŋ
1493	簞	流	尤	初	<i>kaikou</i>	3	<i>ping</i>	tɕ ^h iu	tɕ ^h əu	ts ^h u	L	tɕ ^h u
1494	帘	咸	鹽	來	<i>kaikou</i>	3	<i>ping</i>	liɛm	liɛm	liəm	L	ljəm
1495	槽	效	豪	從	<i>kaikou</i>	1	<i>ping</i>	dzau	dzau	tso	L	tɕo
1496	榨	假	麻	莊	<i>kaikou</i>	2	<i>qu</i>	tɕ ^y æ	tɕ ^y a	tɕa	R	tɕa
1497	卮	止	支	章	<i>kaikou</i>	3	<i>ping</i>	teiɛ	teiɛ	ts ^h i	L	tɕ ^h i
1498	卮	止	支	以	<i>kaikou</i>	3	<i>ping</i>	jiɛ	jie	i	L	i
1499	甌	流	侯	影	<i>kaikou</i>	1	<i>ping</i>	ʔu	ʔu	ku	L	ku
1500	盞	山	山	莊	<i>kaikou</i>	2	<i>shang</i>	tɕ ^y ɛn	tɕ ^y ɛn	tsan	H	tɕan
1501	甕	梗	耕	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^y ɛŋ	ʔ ^y ɛŋ	iəŋ	L	æŋ
1502	缸	江	江	匣	<i>kaikou</i>	2	<i>ping</i>	ɦoŋ	ɦoŋ	haŋ	L	haŋ
1503	甕	通	東	影	<i>hekou</i>	1	<i>qu</i>	ʔuŋ	ʔuŋ	oŋ	R	oŋ
1504	甌	宕	唐	見	<i>kaikou</i>	1	<i>ping</i>	kaŋ	kaŋ	kaŋ	L	kaŋ
1505	杯	蟹	灰	幫	<i>kaikou</i>	1	<i>ping</i>	poi	poi	pɿ	L	pæ
1506	鍾	通	鍾	章	<i>hekou</i>	3	<i>ping</i>	teiɰŋ	teiɰŋ	tsioŋ	L	tɕoŋ
1507	觥	梗	庚	見	<i>hekou</i>	2	<i>ping</i>	k ^w yæŋ	k ^w yəŋ	koiŋ	L	køŋ

1508	觴	宕	陽	書	<i>kaikou</i>	3	<i>ping</i>	ɕiaŋ	ɕiaŋ	siaŋ	L	saŋ
1509	籃	咸	談	來	<i>kaikou</i>	1	<i>ping</i>	lam	lam	lam	L	lam
1510	簍	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu
1511	筍	遇	魚	見	<i>hekou</i>	3	<i>shang</i>	kiɿ	kio	kəi	R	kʌ
1512	筐	宕	陽	溪	<i>hekou</i>	3	<i>ping</i>	k ^{hw} iaŋ	k ^{hw} iaŋ	koŋ	L	kwaŋ
1513	箴	效	肴	莊	<i>kaikou</i>	2	<i>shang</i>	tɕ ^y æu	tɕ ^y au	tso	R	tɕo
1514	籬	止	支	來	<i>kaikou</i>	3	<i>ping</i>	liɛ	lie	li	L	li
1515	筭	效	豪	溪	<i>kaikou</i>	1	<i>shang</i>	k ^h au	k ^h au	ko	R	ko
1516	筭	效	豪	來	<i>kaikou</i>	1	<i>shang</i>	lau	lau	lo	R	lo
1517	篋	咸	帖	溪	<i>kaikou</i>	4	<i>ru</i>	k ^h ɛp	k ^h ɛp	hiəp	H	hɟʌp
1518	筭	止	之	心	<i>kaikou</i>	3	<i>qu</i>	si	sə	sʌ	R	sa
1519	籠	通	東	來	<i>hekou</i>	1	<i>shang</i>	luŋ	luŋ	loŋ	R	loŋ
1520	箱	宕	陽	心	<i>kaikou</i>	3	<i>ping</i>	siaŋ	siaŋ	siaŋ	L	saŋ
1521	傘	山	寒	心	<i>kaikou</i>	1	<i>shang</i>	san	san	san	R	san
1522	蓋	蟹	泰	見	<i>kaikou</i>	1	<i>qu</i>	kai	kai	kai	R	kæ
1523	屏	梗	青	並	<i>kaikou</i>	4	<i>ping</i>	beŋ	beŋ	piəŋ	L	pɟʌŋ
1524	宸	止	微	影	<i>kaikou</i>	3	<i>shang</i>	ʔii	ʔəi	ii	R	ui
1525	袋	蟹	哈	定	<i>kaikou</i>	1	<i>shang</i>	dəi	dəi	tʌi	R	tæ
1526	帛	遇	模	匣	<i>hekou</i>	1	<i>shang</i>	fɨo	fɨo	ho	R	ho
1527	囊	宕	唐	泥	<i>kaikou</i>	1	<i>ping</i>	naŋ	naŋ	naŋ	L	naŋ

1528	橐	宕	鐸	透	<i>kaikou</i>	1	<i>ru</i>	tʰak	tʰak	tʰak	H	tʰak
1529	帳	宕	陽	知	<i>kaikou</i>	3	<i>qu</i>	tʃaŋ	tʃaŋ	tiaŋ	R	teɑŋ
1530	嶺	遇	虞	澄	<i>hekou</i>	3	<i>ping</i>	ɕiɤo	ɕiɤo	tiu	L	teu
1531	幃	止	微	云	<i>hekou</i>	3	<i>ping</i>	ɸʷii	ɸʷiəi	ui	L	y
1532	幔	山	桓	明	<i>hekou</i>	1	<i>qu</i>	mʷan	mʷan	man	R	man
1533	帷	止	脂	云	<i>hekou</i>	3	<i>ping</i>	ɸʷi	ɸʷi	iu	L	ju
1534	幌	宕	唐	匣	<i>hekou</i>	1	<i>shang</i>	ɸʷaŋ	ɸʷaŋ	hoɑŋ	R	hwaŋ
1535	幄	江	覺	影	<i>kaikou</i>	2	<i>ru</i>	ʔʷɔk	ʔʷok	ak	H	ak
1536	幕	宕	鐸	明	<i>kaikou</i>	1	<i>ru</i>	mak	mak	mak	H	mak
1537	統	宕	唐	匣	<i>kaikou</i>	1	<i>qu</i>	ɸaŋ	ɸaŋ	haŋ	R	haŋ
1538	架	假	麻	見	<i>kaikou</i>	2	<i>qu</i>	kʷæ	kʷa	ka	R	ka
1539	櫺	止	微	曉	<i>hekou</i>	3	<i>ping</i>	ɸii	ɸəi	hui	L	hy
1540	櫺	止	支	以	<i>kaikou</i>	3	<i>ping</i>	jiɛ	jie	i	L	i
1541	幢	江	江	澄	<i>kaikou</i>	2	<i>ping</i>	ɕoŋ	ɕoŋ	taŋ	H	taŋ
1542	幡	山	元	敷	<i>hekou</i>	3	<i>ping</i>	pʰwɪɳ	pʰwɪɳ	pən	L	pʌn
1543	簾	咸	鹽	來	<i>kaikou</i>	3	<i>ping</i>	liɛm	liem	liəm	L	ljʌm
1544	箔	宕	鐸	並	<i>kaikou</i>	1	<i>ru</i>	bak	bak	pak	H	pak
1545	鏡	梗	庚	見	<i>kaikou</i>	3	<i>qu</i>	kiæŋ	kiaŋ	kiəŋ	R	kjʌŋ
1546	鑑	咸	銜	見	<i>kaikou</i>	2	<i>qu</i>	kʷæm	kʷam	kam	R	kam
1547	匳	咸	鹽	來	<i>kaikou</i>	3	<i>ping</i>	liɛm	liem	liəm	L	ljʌm

1548	匣	咸	狎	匣	<i>kaikou</i>	2	<i>ru</i>	ɸ ^y æp	ɸ ^y ap	kap	H	kap
1549	鑽	山	桓	精	<i>hekou</i>	1	<i>ping</i>	ts ^w an	ts ^w an	ts ^h an	L	te ^h an
1550	鐳	咸	葉	娘	<i>kaikou</i>	3	<i>ru</i>	ɲ ^y iɛp	ɲ ^y iɛp	niəp	H	sap
1551	錐	止	脂	章	<i>hekou</i>	3	<i>ping</i>	tɕ ^w i	tɕ ^w i	ts ^h io	L	te ^h u
1552	觶	止	支	曉	<i>hekou</i>	3A	<i>ping</i>	h ^w iɛ	h ^w iɛ	hiu	L	hju
1553	鍼	深	侵	章	<i>kaikou</i>	3	<i>ping</i>	tɕim	tɕim	ts ^h im	L	te ^h im
1554	熨	臻	物	影	<i>hekou</i>	3	<i>ru</i>	ʔiun	ʔiun	ul	H	ul
1555	剪	山	仙	精	<i>kaikou</i>	3	<i>shang</i>	tsiɛn	tsien	tsiən	R	tɕɛn
1556	尺	梗	昔	昌	<i>kaikou</i>	3	<i>ru</i>	tɕ ^h iɛk	tɕ ^h iɛk	ts ^h iək	H	te ^h ɛk
1557	刷	山	鎋	生	<i>hekou</i>	2	<i>ru</i>	ʂ ^w yæt	ʂ ^w yat	soa	R	swa
1558	櫛	臻	櫛	莊	<i>kaikou</i>	3	<i>ru</i>	tʂit	tʂit	tsil	H	tɕuɫ
1559	梳	遇	魚	生	<i>hekou</i>	3	<i>ping</i>	ʂiɤ	ʂio	so	L	so
1560	篋	蟹	齊	幫	<i>kaikou</i>	4	<i>ping</i>	pei	pei	pi	L	pi
1561	繩	曾	蒸	船	<i>kaikou</i>	3	<i>ping</i>	ziŋ	ziəŋ	siŋ	L	suŋ
1562	索	宕	鐸	心	<i>kaikou</i>	1	<i>ru</i>	sak	sak	tsak	H	tɕak
1563	紘	梗	耕	匣	<i>kaikou</i>	2	<i>ping</i>	ɸ ^y ɛŋ	ɸ ^y ɛŋ	koiŋ	L	køŋ
1564	綱	宕	唐	見	<i>kaikou</i>	1	<i>ping</i>	kaŋ	kaŋ	kaŋ	L	kaŋ
1565	板	山	刪	幫	<i>kaikou</i>	2	<i>shang</i>	p ^y æn	p ^y an	p ^h an	H	p ^h an
1566	漆	臻	質	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h it	ts ^h it	ts ^h il	H	te ^h il
1567	磬	山	元	奉	<i>hekou</i>	3	<i>ping</i>	b ^w iɛn	b ^w ion	pən	L	pɛn

1568	藕	止	支	徹	<i>kaikou</i>	3	<i>ping</i>	tʰiɛ	tʰie	tʰi	L	li
1569	桎	臻	質	章	<i>kaikou</i>	3	<i>ru</i>	tɕit	tɕit	til	H	tɕil
1570	梏	通	沃	見	<i>hekou</i>	1	<i>ru</i>	kʊok	kʊok	kok	H	kok
1571	枷	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	kʷæ	kʷa	ka	L	ka
1572	杻	流	尤	娘	<i>kaikou</i>	3	<i>shang</i>	ŋju	ŋjəu	liu	R	ŋju, tɕʰu
1573	鈇	蟹	泰	定	<i>kaikou</i>	1	<i>qu</i>	dai	dai	tʰai	R	tʰæ
1574	鉞	江	覺	崇	<i>kaikou</i>	2	<i>ru</i>	dzʷok	dzʷok	tʰak	H	tɕʰak
1575	鐐	效	蕭	來	<i>kaikou</i>	4	<i>qu</i>	leu	leu	lio	R	ljo
1576	咎	止	之	徹	<i>kaikou</i>	3	<i>ping</i>	tʰi	tʰə	tʰli	L	tʰæ
1577	燈	曾	登	端	<i>kaikou</i>	1	<i>ping</i>	təŋ	təŋ	tɪŋ	L	tuŋ
1578	燭	通	燭	章	<i>hekou</i>	3	<i>ru</i>	tɕiʊok	tɕiʊok	tʰiok	H	tɕʰok
1579	檠	梗	庚	群	<i>kaikou</i>	3	<i>ping</i>	giæŋ	gian	kiæŋ	L	kjʌŋ
1580	篝	流	侯	見	<i>kaikou</i>	1	<i>ping</i>	ku	ku	ku	L	ku
1581	煤	蟹	灰	明	<i>kaikou</i>	1	<i>ping</i>	moi	moi	mʌi	L	mæ
1582	炭	山	寒	透	<i>kaikou</i>	1	<i>qu</i>	tʰan	tʰan	tʰan	R	tʰan
1583	炬	遇	魚	群	<i>hekou</i>	3	<i>shang</i>	giɿ	gio	kə	R	kʌ
1584	爐	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lʊo	lʊo	lo	L	lo
1585	蓑	果	戈	心	<i>hekou</i>	1	<i>ping</i>	sʷa	sʷa	sa	L	sa
1586	笠	深	緝	來	<i>kaikou</i>	3	<i>ru</i>	lip	lip	lip	H	lip
1587	篲	通	東	匣	<i>hekou</i>	1	<i>ping</i>	fiuŋ	fiuŋ	hoŋ	L	hoŋ

1588	筭	山	先	見	<i>kaikou</i>	4	<i>shang</i>	ken	ken	hiən	R	hjaŋ
1589	桔	山	屑	見	<i>kaikou</i>	4	<i>ru</i>	ket	ket	kil	H	kil
1591	棹	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	kau	kau	ko	L	ko
1591	轆	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	lok	L	lok
1592	轆	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lɤo	lɤo	lo	L	lo
1593	椹	深	侵	知	<i>kaikou</i>	3	<i>ping</i>	tʃim	tʃim	sim	L	sim
1594	櫝	臻	質	章	<i>kaikou</i>	3	<i>ru</i>	teit	teit	tsil	H	tɕil
1595	扇	山	仙	書	<i>kaikou</i>	3	<i>qu</i>	ɕien	ɕien	siən	R	sɔŋ
1596	筴	咸	洽	生	<i>kaikou</i>	2	<i>ru</i>	ɕʰɛp	ɕʰɛp	sap	H	sap
1597	鉞	止	支	滂	<i>kaikou</i>	3B	<i>ping</i>	pʰiɛ	pʰiɛ	pʰi	L	pʰi
1598	鉤	流	侯	見	<i>kaikou</i>	1	<i>ping</i>	ku	ku	ku	L	ku
1599	鑱	山	黠	崇	<i>kaikou</i>	2	<i>ru</i>	dzʰɛt	dzʰɛt	tsʰal	H	tɕʰal
1600	鑪	山	桓	清	<i>hekou</i>	1	<i>qu</i>	tsʰwɔn	tsʰwɔn	tsʰan	R	tɕʰan
1601	鎌	咸	鹽	來	<i>kaikou</i>	3	<i>ping</i>	liɛm	liɛm	liəm	L	ljɔm
1602	釭	咸	咸	生	<i>kaikou</i>	2	<i>ping</i>	ɕʰɛm	ɕʰɛm	sam	L	sam
1603	鍤	山	屑	見	<i>kaikou</i>	4	<i>ru</i>	ket	ket	kiəl	H	kjaɭ
1604	銍	臻	質	知	<i>kaikou</i>	3	<i>ru</i>	tʃit	tʃit	til	H	tɕil
1605	鑪	遇	魚	來	<i>hekou</i>	3	<i>qu</i>	liɤ	lio	liə	R	lja
1606	錫	宕	唐	透	<i>kaikou</i>	1	<i>qu</i>	tʰaŋ	tʰaŋ	tʰaŋ	R	tʰaŋ
1607	銚	果	戈	從	<i>hekou</i>	1	<i>ping</i>	dzʰa	dzʰa	tsʰa	L	tɕʰa

1608	鏟	山	刪	初	<i>kaikou</i>	2	<i>shang</i>	tɕʰyæn	tɕʰyan	san	R	san
1609	鉗	咸	鹽	群	<i>kaikou</i>	3B	<i>ping</i>	g ^y iɛm	g ^y iɛm	kiəm	L	kjɒm
1610	鎚	蟹	灰	端	<i>hekou</i>	1	<i>ping</i>	t ^w oi	t ^w oi	t ^h oi	L	t ^h ø
1611	坩	咸	談	溪	<i>kaikou</i>	1	<i>ping</i>	k ^h am	k ^h am	kam	L	kam
1612	塢	果	戈	見	<i>hekou</i>	1	<i>ping</i>	k ^w a	k ^w a	koa	L	kwa
1613	鎖	果	戈	心	<i>hekou</i>	1	<i>shang</i>	s ^w a	s ^w a	soa	R	swa
1614	鋌	止	支	禪	<i>kaikou</i>	3	<i>ping</i>	dzie	dzie	si	L	si
1615	鍵	山	元	群	<i>kaikou</i>	3	<i>shang</i>	giɻn	gion	kən	R	kɒn
1616	鑰	宕	藥	以	<i>kaikou</i>	3	<i>ru</i>	jiak	jiak	iak	H	jak
1617	鉋	效	肴	並	<i>kaikou</i>	2	<i>ping</i>	b ^y æu	b ^y au	p ^h o	L	p ^h o
1618	筏	深	侵	清	<i>kaikou</i>	3	<i>qu</i>	ts ^h im	ts ^h im	ts ^h im	L	te ^h im
1619	朽	遇	模	疑	<i>hekou</i>	1	<i>ping</i>	ŋɯo	ŋɯo	o	L	o
1620	鎗	山	桓	明	<i>hekou</i>	1	<i>ping</i>	m ^w an	m ^w an	man	L	man
1621	鏹	臻	魂	幫	<i>hekou</i>	1	<i>ping</i>	pɯon	pɯon	pun	L	pun
1622	鋸	遇	魚	見	<i>hekou</i>	3	<i>qu</i>	kiɻ	kio	kə	R	kɒ
1623	斧	遇	虞	非	<i>hekou</i>	3	<i>shang</i>	piɯɤ	piɯo	pu	R	pu
1624	鑿	宕	鐸	從	<i>kaikou</i>	1	<i>ru</i>	dzak	dzak	ts ^h ak	H	te ^h ak
1625	鋤	遇	魚	崇	<i>hekou</i>	3	<i>ping</i>	dzɿɻ	dzɿo	sə	L	sɒ
1626	鑊	宕	藥	見	<i>hekou</i>	3	<i>ru</i>	k ^w iaŋ	k ^w iaŋ	hoak	H	hwak
1627	鎡	止	之	精	<i>kaikou</i>	3	<i>ping</i>	tsi	tsə	tsɒ	L	tea

1628	鎡	止	之	群	<i>kaikou</i>	3	<i>ping</i>	gi	gə	kii	L	ki
1629	鎡	效	肴	娘	<i>kaikou</i>	2	<i>ping</i>	ŋ ^y æu	ŋ ^y au	io	L	io
1630	鉞	山	末	並	<i>hekou</i>	1	<i>ru</i>	b ^w at	b ^w at	pal	H	pal
1631	鈴	梗	青	來	<i>kaikou</i>	4	<i>ping</i>	leŋ	leŋ	liəŋ	L	ljʌŋ
1632	鐸	宕	鐸	定	<i>kaikou</i>	1	<i>ru</i>	dak	dak	t ^h ak	H	t ^h ak
1633	網	宕	陽	微	<i>kaikou</i>	3	<i>shang</i>	mian	mian	man	H	man
1634	罟	遇	模	見	<i>hekou</i>	1	<i>shang</i>	kɿo	kɿo	ko	R	ko
1635	罟	曾	登	精	<i>kaikou</i>	1	<i>ping</i>	tsəŋ	tsəŋ	tsiŋ	R	tɕuŋ
1636	罟	假	麻	精	<i>kaikou</i>	3	<i>ping</i>	tsiæ	tsia	tsiə	L	tɕʌ
1637	簋	遇	模	匣	<i>hekou</i>	1	<i>shang</i>	fiɿo	fiɿo	ho	R	ho
1638	畱	流	尤	來	<i>kaikou</i>	3	<i>shang</i>	liu	ləu	liu	R	lju
1639	笱	流	侯	見	<i>kaikou</i>	1	<i>shang</i>	ku	ku	ku	R	ku
1640	簠	宕	鐸	溪	<i>hekou</i>	1	<i>ru</i>	k ^{hw} ak	k ^{hw} ak	koak	H	kwak
1641	耒	蟹	灰	來	<i>hekou</i>	1	<i>qu</i>	l ^w oi	l ^w oi	lai	R	læ
1642	耜	止	之	邪	<i>kaikou</i>	3	<i>shang</i>	zi	zə	sʌ	R	sa
1643	鐸	假	麻	匣	<i>hekou</i>	2	<i>ping</i>	fi ^{wy} æ	fi ^{wy} a	hoa	L	hwa
1644	犁	蟹	齊	來	<i>kaikou</i>	4	<i>ping</i>	lei	lei	liəi	L	lje
1645	彈	山	寒	定	<i>kaikou</i>	1	<i>ping</i>	dan	dan	t ^h an	L	t ^h an
1646	鰲	曾	登	精	<i>kaikou</i>	1	<i>ping</i>	tsəŋ	tsəŋ	tsiŋ	L	tɕuŋ
1647	弋	曾	職	以	<i>kaikou</i>	3	<i>ru</i>	jik	jiək	ik	H	ik

1648	繳	宕	藥	章	<i>kaikou</i>	3	<i>ru</i>	teiak	teiak	tsiak	H	teak
1649	鍬	效	宵	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iɛu	ts ^h ieu	ts ^h io	L	te ^h o
1650	鍤	咸	洽	初	<i>kaikou</i>	2	<i>ru</i>	ts ^h ɣɛp	ts ^h ɣɛp	sap	H	sap
1651	耙	假	麻	並	<i>kaikou</i>	2	<i>ping</i>	b ^ɣ æ	b ^ɣ a	p ^h a	L	p ^h a
1652	杵	咸	嚴	曉	<i>kaikou</i>	3	<i>ping</i>	hiam	hiam	him	L	hum
1653	耬	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	k ^ɣ æ	k ^ɣ a	ka	L	ka
1654	耬	流	侯	來	<i>kaikou</i>	1	<i>shang</i>	lu	lu	lu	R	lu
1655	礪	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	lok	H	lok
1656	礪	通	沃	定	<i>hekou</i>	1	<i>ru</i>	duok	duok	tok	H	tok
1657	綜	通	冬	精	<i>hekou</i>	1	<i>qu</i>	tsuon	tsuon	tson	R	tson
1658	緯	止	微	云	<i>hekou</i>	3	<i>qu</i>	fi ^w ii	fi ^w iəi	ui	H	y
1659	機	止	微	見	<i>kaikou</i>	3	<i>ping</i>	kii	kəi	kii	L	ki
1660	滕	曾	蒸	書	<i>kaikou</i>	3	<i>qu</i>	ɕiŋ	ɕiəŋ	siŋ	R	suŋ
1661	腕	山	桓	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w an	ʔ ^w an	oan	L	wan
1662	繡	梗	耕	幫	<i>kaikou</i>	2	<i>ping</i>	p ^ɣ ɛŋ	p ^ɣ eŋ	piŋ	L	puŋ
1663	匹	臻	質	滂	<i>kaikou</i>	3A	<i>ru</i>	p ^h it	p ^h it	p ^h il	H	p ^h il
1664	幅	通	屋	非	<i>hekou</i>	3	<i>ru</i>	piuk	piuk	pok	H	pok
1665	筭	遇	虞	敷	<i>hekou</i>	3	<i>ping</i>	p ^h iɤo	p ^h iɤo	pu	L	pu
1666	梭	果	戈	心	<i>hekou</i>	1	<i>ping</i>	s ^w a	s ^w a	sa	L	sa
1667	寇	流	侯	溪	<i>kaikou</i>	1	<i>qu</i>	k ^h u	k ^h u	ku	R	ku

1668	箴	梗	清	禪	<i>kaikou</i>	3	<i>ping</i>	<i>dziɛŋ</i>	<i>dziɛŋ</i>	<i>siəŋ</i>	L	<i>sɔŋ</i>
1669	裨	山	元	云	<i>hekou</i>	3	<i>ping</i>	<i>ɦwɪɳ</i>	<i>ɦwɪon</i>	<i>uən</i>	L	<i>wɔɳ</i>
1670	簠	宕	藥	云	<i>hekou</i>	3	<i>ru</i>	<i>ɦwɪaŋ</i>	<i>ɦwɪaŋ</i>	<i>iak</i>	H	<i>jak</i>
1671	杼	遇	魚	澄	<i>hekou</i>	3	<i>shang</i>	<i>ɕiɤ</i>	<i>ɕio</i>	<i>tiə</i>	R	<i>tɛɤ</i>
1672	柚	通	屋	澄	<i>hekou</i>	3	<i>ru</i>	<i>ɕiuk</i>	<i>ɕiuk</i>	<i>tʰiuk</i>	H	<i>tɛʰuk</i>
1673	簪	止	脂	邪	<i>hekou</i>	3	<i>qu</i>	<i>zʷi</i>	<i>zʷi</i>	<i>siu</i>	R	<i>su</i>
1674	箒	流	尤	章	<i>kaikou</i>	3	<i>shang</i>	<i>tɕiu</i>	<i>tɕəu</i>	<i>tsʰiu</i>	R	<i>tɛʰu</i>
1675	刀	效	豪	端	<i>kaikou</i>	1	<i>ping</i>	<i>tau</i>	<i>tau</i>	<i>to</i>	L	<i>to</i>
1676	鞘	效	宵	心	<i>kaikou</i>	3	<i>ping</i>	<i>siɛu</i>	<i>sieu</i>	<i>sio</i> ³⁷⁸	L	<i>tɛʰo</i>
1677	瓦	假	麻	疑	<i>hekou</i>	2	<i>shang</i>	<i>ŋʷɤ</i>	<i>ŋʷa</i>	<i>oa</i>	R	<i>wa</i>
1678	瓢	山	仙	章	<i>hekou</i>	3	<i>ping</i>	<i>tɕʷiɛɳ</i>	<i>tɕʷiɛɳ</i>	<i>tsiəɳ</i>	L	<i>tɛɳ</i>
1679	瓠	梗	青	來	<i>kaikou</i>	4	<i>ping</i>	<i>leŋ</i>	<i>leŋ</i>	<i>liəŋ</i>	L	<i>ljɔŋ</i>
1680	甓	梗	錫	並	<i>kaikou</i>	4	<i>ru</i>	<i>bek</i>	<i>bek</i>	<i>piək</i>	H	<i>pjɔk</i>
1681	棍	臻	魂	見	<i>hekou</i>	1	<i>shang</i>	<i>kɥon</i>	<i>kɥon</i>	<i>kon</i>	R	<i>kon</i>
1682	棒	江	江	並	<i>kaikou</i>	2	<i>shang</i>	<i>bɔŋ</i>	<i>bɔŋ</i>	<i>paŋ</i>	R	<i>paŋ</i>
1683	椎	止	脂	澄	<i>hekou</i>	3	<i>ping</i>	<i>ɕʷi</i>	<i>ɕʷi</i>	<i>tʰoi</i>	L	<i>tɛʰø</i>
1684	楔	山	屑	心	<i>kaikou</i>	4	<i>ru</i>	<i>set</i>	<i>set</i>	<i>siəl</i>	H	<i>sɔl</i>
1685	椿	江	江	知	<i>kaikou</i>	2	<i>ping</i>	<i>tɔŋ</i>	<i>tɔŋ</i>	<i>tsoaŋ</i>	L	<i>tɛwaŋ</i>

³⁷⁸ Also[so](L tone) (效肴生開 2 平 [ɕʰɤu] [ɕʰau] [tɕʰo])

1686	櫟	山	月	群	hekou	3	ru	g ^w iɿt	g ^w iot	kuəl	L	kwəl
1687	椽	江	覺	知	kaikou	2	ru	t ^ʷ ɔk	t ^ʷ ok	t ^h ak	H	t ^h ak
1688	杙	曾	職	以	kaikou	3	ru	jik	jiək	ik	H	ik
1689	筍	效	肴	生	kaikou	2	ping	ɿ ^ʷ æu	ɿ ^ʷ au	sio	L	so
1690	桶	通	東	透	hekou	1	shang	t ^h uŋ	t ^h uŋ	t ^h oŋ	H	t ^h oŋ
1691	綆	梗	庚	見	kaikou	2	shang	k ^ʷ æŋ	k ^ʷ aŋ	kiəŋ	R	kjʌŋ
1692	繡	臻	術	以	hekou	3	ru	j ^w it	j ^w it	hiul	H	hjul
1693	瓷	止	脂	從	kaikou	3	ping	dzi	dzi	tsʌ	L	tea
1694	缶	流	尤	非	kaikou	3	shang	piu	pəu	pu	H	pu
1695	坯	蟹	灰	滂	kaikou	1	ping	p ^h oi	p ^h oi	pʌi	L	pæ
1696	壑	梗	錫	見	kaikou	4	ru	kek	kek	kiək	H	kjʌk
1697	栗	效	宵	清	kaikou	3	ping	ts ^h iɛu	ts ^h ieu	ts ^h io	L	tɛ ^h o
1698	杓	宕	藥	禪	kaikou	3	ru	dziak	dziak	tsiak	H	tɛak
1699	瓢	效	宵	並	kaikou	3A	ping	biɛu	bieu	p ^h io	L	p ^h jo
1700	蠡	蟹	齊	來	kaikou	4	ping	lei	lei	liəi	L	lje
1701	棋	止	之	群	kaikou	3	ping	gi	gə	kii	L	ki
1702	弈	梗	昔	以	kaikou	3	ru	jiək	jiək	hiək	H	hjʌk
1703	骰	流	侯	定	kaikou	1	ping	du	du	t ^h u	L	t ^h u
1704	枰	梗	庚	並	kaikou	3	ping	biæŋ	bian	p ^h iəŋ	L	p ^h jʌŋ
1705	丈	宕	陽	澄	kaikou	3	shang	ɕiaŋ	ɕiaŋ	tiaŋ	L	tɛaŋ

1706	枋	蟹	佳	見	hekou	2	shang	k ^w ɿɛ	k ^w ɿe	koai	L	koæ
1707	筴	通	鍾	見	hekou	3	ping	kiɿoŋ	kiɿoŋ	koŋ	L	koŋ
1708	杖	宕	陽	澄	kaikou	3	shang	ɕiaŋ	ɕiaŋ	tiaŋ	R	teŋ
1709	礮	山	桓	端	hekou	1	qu	t ^w an	t ^w an	tan	R	tan
1710	礪	蟹	祭	來	kaikou	3	qu	liei	liei	liəi	R	ljʌ
1711	砥	止	脂	章	kaikou	3	shang	tɕi	tɕi	tsi	H	tɕi
1712	礪	梗	青	匣	kaikou	4	ping	fiɛŋ	fiɛŋ	hiəŋ	L	hjʌŋ
1713	鞦	流	尤	清	kaikou	3	ping	ts ^h iu	ts ^h iəu	ts ^h iu	L	tɕ ^h u
1714	鞦	山	仙	清	kaikou	3	ping	ts ^h iɛn	ts ^h ien	ts ^h iən	L	tɕ ^h ʌn
1715	毬	流	尤	群	kaikou	3	ping	giu	gəu	ku	L	ku
1716	毬	山	先	見	kaikou	4	shang	ken	ken	kiən	R	kjʌn
1717	孟	遇	虞	云	hekou	3	ping	fiɿɔ	fiɿo	u	L	u
1718	鉢	山	末	幫	hekou	1	ru	p ^w at	p ^w at	pal	H	pal
1719	塔	咸	盍	透	kaikou	1	ru	t ^h ap	t ^h ap	t ^h ap	H	t ^h ap
1720	龕	咸	覃	溪	kaikou	1	ping	k ^h əm	k ^h əm	ham	L	ham
1721	廐	流	尤	見	kaikou	3	qu	kiu	kəu	ku	R	ku
1722	櫪	梗	錫	來	kaikou	4	ru	lek	lek	liək	H	ljʌk
1723	柳	宕	唐	疑	kaikou	1	ping	ŋaŋ	ŋaŋ	aŋ	L	aŋ
1724	筩	流	侯	端	kaikou	1	ping	tu	tu	to	L	to
1725	蕒	止	脂	群	hekou	3B	qu	g ^w ɿi	g ^w ɿi	kuəi	R	kwe

1726	畚	臻	魂	幫	hekou	1	shang	pʊon	pʊon	pon	H	pon
1727	筐	止	微	非	kaikou	3	shang	pʰi	pəi	pi	R	pi
1728	函	咸	覃	匣	kaikou	1	ping	ɦəm	ɦəm	ham	L	ham
1729	飯	山	元	奉	hekou	3	qu	bʷɪɳ	bʷion	pan	R	pan
1730	食	曾	職	船	kaikou	3	ru	zik	ziək	sik	H	sik
1731	饗	通	鍾	影	hekou	3	ping	ʔiɰŋ	ʔiɰŋ	oŋ	L	oŋ
1732	飡	臻	魂	心	hekou	1	ping	sʊon	sʊon	son	L	son
1733	餉	效	肴	匣	kaikou	2	ping	ɦʷæu	ɦʷau	hio	L	hjo
1734	饌	山	刪	崇	hekou	2	shang	dzɿʷæn	dzɿʷan	tsʰan	R	tsʰan
1735	饈	山	仙	禪	kaikou	3	qu	dziɛn	dzien	siən	H	sɛn
1736	饊	流	尤	心	kaikou	3	ping	siu	səu	siu	L	su
1737	餽	臻	魂	匣	hekou	1	ping	ɦʊon	ɦʊon	hon	L	hon
1738	飰	臻	魂	定	hekou	1	ping	dʊon	dʊon	tun	L	tun
1739	餽	山	桓	心	hekou	1	ping	sʷan	sʷan	san	L	san
1740	餹	咸	咸	匣	kaikou	2	qu	ɦʷɛm	ɦʷɛm	ham	R	ham
1741	餽	宕	鐸	幫	kaikou	1	ru	pak	pak	pak	R	pak
1742	飴	宕	鐸	透	kaikou	1	ru	tʰak	tʰak	tʰak	H	tʰak
1743	饅	山	桓	明	hekou	1	ping	mʷan	mʷan	man	L	man
1744	餒	流	侯	定	kaikou	1	ping	du	du	tʰu	L	tʰu
1745	餅	梗	清	幫	hekou	3A	shang	piɛŋ	piɛŋ	piəŋ	R	pjɛŋ

1746	餌	止	之	日	<i>kaikou</i>	3	<i>qu</i>	ɳi	ɳə	zi	R	i
1747	資	止	脂	從	<i>kaikou</i>	3	<i>ping</i>	dzi	dzi	tsʌ	L	tea
1748	饀	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	kau	kau	ko	L	ko
1749	糜	止	支	明	<i>kaikou</i>	3B	<i>ping</i>	m ^y iɛ	m ^y ie	mi	L	mi
1750	粥	通	屋	章	<i>hekou</i>	3	<i>ru</i>	teiuk	teiuk	tsiuk	H	teuk
1751	饅	山	仙	章	<i>kaikou</i>	3	<i>ping</i>	teiɛn	teien	tsiən	L	teʌn
1752	漿	宕	陽	精	<i>kaikou</i>	3	<i>ping</i>	tsiaŋ	tsiaŋ	tsiaŋ	L	teaŋ
1753	糙	效	豪	清	<i>kaikou</i>	1	<i>qu</i>	ts ^h au	ts ^h au	tso	R	teo
1754	糲	山	曷	來	<i>kaikou</i>	1	<i>ru</i>	lan	lan	lal	H	lal
1755	米	蟹	齊	明	<i>kaikou</i>	4	<i>shang</i>	mei	mei	mi	R	mi
1756	粒	深	緝	來	<i>kaikou</i>	3	<i>ru</i>	lip	lip	lip	H	lip
1757	粍	效	宵	昌	<i>kaikou</i>	3	<i>shang</i>	tɕ ^h iɛu	tɕ ^h ieu	ts ^h io	H	tɕ ^h o
1758	糲	流	尤	溪	<i>kaikou</i>	3	<i>shang</i>	k ^h iu	k ^h əu	ku	R	ku
1759	糲	流	侯	匣	<i>kaikou</i>	1	<i>ping</i>	ɦu	ɦu	hu	L	hu
1760	糧	宕	陽	來	<i>kaikou</i>	3	<i>ping</i>	liaŋ	liaŋ	liaŋ	L	ljaŋ
1761	醋	遇	模	清	<i>hekou</i>	1	<i>qu</i>	ts ^h uo	ts ^h uo	ts ^h o	R	tɕ ^h o
1762	醢	蟹	齊	曉	<i>kaikou</i>	4	<i>ping</i>	hei	hei	hiəi	L	hje
1763	醢	蟹	哈	曉	<i>kaikou</i>	1	<i>shang</i>	həi	həi	hʌi	R	hæ
1764	鮓	假	麻	莊	<i>kaikou</i>	2	<i>shang</i>	tɕ ^y æ	tɕ ^y a	tsa	R	tea
1765	膾	蟹	泰	見	<i>kaikou</i>	1	<i>qu</i>	kai	kai	hoi	R	hø

1766	炙	梗	昔	章	<i>kaikou</i>	3	<i>ru</i>	teiek	teiek	tsiək	H	teək
1767	羹	梗	庚	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ æŋ	k ^ʷ aŋ	kɿŋ	L	kæŋ
1768	湯	宕	唐	透	<i>kaikou</i>	1	<i>ping</i>	t ^h aŋ	t ^h aŋ	t ^h aŋ	L	t ^h aŋ
1769	羹	蟹	齊	精	<i>kaikou</i>	4	<i>ping</i>	tsei	tsei	tsiəi	L	tse
1770	豉	止	支	禪	<i>kaikou</i>	3	<i>qu</i>	dzie	dzie	si	H	si
1771	油	流	尤	以	<i>kaikou</i>	3	<i>ping</i>	jiu	jəu	iu	L	ju
1772	醬	宕	陽	精	<i>kaikou</i>	3	<i>qu</i>	tsiaŋ	tsiaŋ	tsiaŋ	R	teŋ
1773	撒	山	寒	心	<i>kaikou</i>	1	<i>shang</i>	san	san	san	R	san
1775	飴	止	之	以	<i>kaikou</i>	3	<i>ping</i>	ji	jə	i	L	i
1776	錫	梗	清	邪	<i>kaikou</i>	3	<i>ping</i>	ziɛŋ	ziɛŋ	siəŋ	L	sɿŋ
1776	糖	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
1777	酒	流	尤	精	<i>kaikou</i>	3	<i>shang</i>	tsiu	tsəu	tsiu	H	təu
1778	醴	蟹	齊	來	<i>kaikou</i>	4	<i>shang</i>	lei	lei	liəi	H	lje
1779	醴	山	末	滂	<i>hekou</i>	1	<i>ru</i>	p ^h wat	p ^h wat	pal	H	pal
1780	醴	蟹	灰	滂	<i>kaikou</i>	1	<i>ping</i>	p ^h oi	p ^h oi	pɿi	L	pæ
1781	醴	效	豪	來	<i>kaikou</i>	1	<i>ping</i>	lau	lau	lio	L	ljo
1782	酶	蟹	灰	明	<i>kaikou</i>	1	<i>ping</i>	moi	moi	mɿi	L	mæ
1783	酵	效	肴	見	<i>kaikou</i>	2	<i>qu</i>	k ^ʷ æu	k ^ʷ au	kio	H	kjo
1784	麴	通	屋	溪	<i>hekou</i>	3	<i>ru</i>	k ^h iuk	k ^h iuk	kuk	H	kuk
1785	漚	通	東	端	<i>hekou</i>	1	<i>qu</i>	tun	tun	ton	R	ton

1786	酪	宕	鐸	來	<i>kaikou</i>	1	<i>ru</i>	<i>lak</i>	<i>lak</i>	<i>lak</i>	H	
1787	酥	遇	模	心	<i>hekou</i>	1	<i>ping</i>	<i>sɯo</i>	<i>sɯo</i>	<i>so</i>	L	<i>so</i>
1788	蜜	臻	質	明	<i>kaikou</i>	3A	<i>ru</i>	<i>mit</i>	<i>mit</i>	<i>mil</i>	H	<i>mil</i>
1789	鯨	宕	陽	心	<i>kaikou</i>	3	<i>shang</i>	<i>siaŋ</i>	<i>siaŋ</i>	<i>siaŋ</i>	H	<i>saŋ</i>
1790	脯	遇	虞	非	<i>hekou</i>	3	<i>shang</i>	<i>piɤɔ</i>	<i>piɤo</i>	<i>p^ho</i>	H	<i>p^ho</i>
1791	腊	梗	昔	心	<i>kaikou</i>	3	<i>ru</i>	<i>siek</i>	<i>siek</i>	<i>siək</i>	H	<i>sək</i>
1792	肉	通	屋	日	<i>hekou</i>	3	<i>ru</i>	<i>ɲiuk</i>	<i>ɲiuk</i>	<i>ziuk</i>	H	<i>juk</i>
1793	鰾	咸	咸	見	<i>kaikou</i>	2	<i>shang</i>	<i>k^ʷɛm</i>	<i>k^ʷɛm</i>	<i>kiəm</i>	R	<i>kjɤm</i>
1794	𩶇	果	歌	從	<i>kaikou</i>	1	<i>ping</i>	<i>dza</i>	<i>dza</i>	<i>tša</i>	L	<i>tša</i>
1795	鹽	咸	鹽	以	<i>kaikou</i>	3	<i>ping</i>	<i>jiɛm</i>	<i>jiɛm</i>	<i>iəm</i>	L	<i>jɤm</i>
1796	滷	遇	模	來	<i>hekou</i>	1	<i>shang</i>	<i>lɤo</i>	<i>lɤo</i>	<i>lo</i>	H	<i>lo</i>
1797	𩶇	假	麻	莊	<i>kaikou</i>	2	<i>ping</i>	<i>tɕ^ʷæ</i>	<i>tɕ^ʷa</i>	<i>tša</i>	L	<i>tša</i>
1798	菹	遇	魚	莊	<i>hekou</i>	3	<i>ping</i>	<i>tɕiɤ</i>	<i>tɕio</i>	<i>tso</i>	L	<i>tso</i>
1799	𩶇	咸	覃	心	<i>kaikou</i>	1	<i>shang</i>	<i>səm</i>	<i>səm</i>	<i>ts^ham</i>	R	<i>tɕ^ham</i>
1800	脰	宕	鐸	曉	<i>hekou</i>	1	<i>ru</i>	<i>h^wak</i>	<i>h^wak</i>	<i>hoak</i>	H	<i>hwak</i>
1801	麵	山	先	明	<i>kaikou</i>	4	<i>qu</i>	<i>men</i>	<i>men</i>	<i>miən</i>	H	<i>mjɤn</i>
1802	𩶇	遇	虞	敷	<i>hekou</i>	3	<i>ping</i>	<i>p^hiɤɔ</i>	<i>p^hiɤo</i>	<i>pu</i>	L	<i>pu</i>
1803	𩶇	山	末	明	<i>hekou</i>	1	<i>ru</i>	<i>m^wat</i>	<i>m^wat</i>	<i>mal</i>	L	<i>mal</i>
1804	𩶇	山	屑	心	<i>kaikou</i>	4	<i>ru</i>	<i>set</i>	<i>set</i>	<i>siəl</i>	H	<i>səl</i>
1805	茶	假	麻	澄	<i>kaikou</i>	2	<i>ping</i>	<i>ɕ^ʷæ</i>	<i>ɕ^ʷa</i>	<i>ta</i>	L	<i>ta</i>

1806	茗	梗	青	明	<i>kaikou</i>	4	<i>shang</i>	meŋ	meŋ	miəŋ	R	mjʌŋ
1807	糟	效	豪	精	<i>kaikou</i>	1	<i>ping</i>	tsau	tsau	tso	L	tɕo
1808	粕	宕	鐸	滂	<i>kaikou</i>	1	<i>ru</i>	pʰak	pʰak	pak	H	pak
1809	冠	山	桓	見	<i>hekou</i>	1	<i>ping</i>	kʷan	kʷan	koan	L	kwan
1810	冕	山	仙	明	<i>kaikou</i>	3B	<i>shang</i>	mʷiɛn	mʷiɛn	miən	R	mjʌn
1811	幞	通	燭	奉	<i>hekou</i>	3	<i>ru</i>	biɯɔk	biɯɔk	pok	H	pok
1812	弁	山	仙	並	<i>kaikou</i>	3B	<i>qu</i>	bʷiɛn	bʷiɛn	piən	R	pjʌn
1813	巾	臻	真	見	<i>kaikou</i>	3B	<i>ping</i>	kʷin	kʷin	kən	L	kʌn
1814	帽	效	豪	明	<i>kaikou</i>	1	<i>qu</i>	mau	mau	mo	R	mo
1815	𦘔	蟹	皆	見	<i>kaikou</i>	2	<i>qu</i>	kʷei	kʷei	kai	R	kæ
1816	幘	梗	麥	莊	<i>kaikou</i>	2	<i>ru</i>	tɕʷɛk	tɕʷɛk	tsiək	H	tɕʌk
1817	袍	效	豪	並	<i>kaikou</i>	1	<i>ping</i>	bau	bau	pʰo	L	pʰo
1818	裘	流	尤	群	<i>kaikou</i>	3	<i>ping</i>	giu	gəu	ku	L	ku
1819	衫	咸	銜	生	<i>kaikou</i>	2	<i>ping</i>	ɕʷæm	ɕʷam	sam	L	sam
1820	裳	宕	陽	禪	<i>kaikou</i>	3	<i>ping</i>	dziaŋ	dziaŋ	siaŋ	L	saŋ
1821	靴	果	戈	曉	<i>hekou</i>	3	<i>ping</i>	hʷia	hʷia	hoa	L	hwa
1822	鞋	蟹	佳	匣	<i>kaikou</i>	2	<i>ping</i>	ɦʷɛ	ɦʷɛ	hiəi	L	hje
1823	履	止	脂	來	<i>kaikou</i>	3	<i>shang</i>	li	li	li	R	li
1824	舄	梗	昔	心	<i>kaikou</i>	3	<i>ru</i>	siek	siek	siək	H	sʌk
1825	裙	臻	文	群	<i>hekou</i>	3	<i>ping</i>	giun	giun	kun	L	kun

1826	襴	山	山	見	<i>kaikou</i>	2	<i>qu</i>	k ^y en	k ^y en	kan	R	kan
1827	裊	臻	魂	見	<i>hekou</i>	1	<i>ping</i>	k _u on	k _u on	kun	L	kun
1828	袴	遇	模	溪	<i>hekou</i>	1	<i>qu</i>	k ^h u _o	k ^h u _o	ko ³⁷⁹	R	ko
1829	韞	山	月	微	<i>hekou</i>	3	<i>ru</i>	m ^w iɿt	m ^w ion	mal	H	mal
1830	韞	通	東	影	<i>hekou</i>	1	<i>ping</i>	ʔuŋ	ʔuŋ	oŋ	L	oŋ
1831	襜	梗	昔	幫	<i>kaikou</i>	3A	<i>ru</i>	piək	piek	piək	H	pjɛk
1832	襜	梗	昔	精	<i>kaikou</i>	3	<i>ru</i>	tsiek	tsiek	tsiək	H	tɛɛk
1833	袪	遇	魚	溪	<i>hekou</i>	3	<i>ping</i>	k ^h iɿ	k ^h io	kə	L	kɛ
1834	袂	蟹	祭	明	<i>kaikou</i>	3A	<i>qu</i>	miɛi	miei	miəi	R	mje
1835	袂	梗	昔	以	<i>kaikou</i>	3	<i>ru</i>	jiək	jiem	ɛik	L	æk
1836	袖	流	尤	邪	<i>kaikou</i>	3	<i>qu</i>	ziu	zəu	siu	R	su
1837	衲	宕	鐸	透	<i>kaikou</i>	1	<i>ru</i>	t ^h ak	t ^h ak	t ^h ak	H	t ^h ak
1838	襠	宕	唐	端	<i>kaikou</i>	1	<i>ping</i>	taŋ	taŋ	taŋ	L	taŋ
1839	襠	山	元	曉	<i>hekou</i>	3	<i>qu</i>	h ^w iɿn	h ^w ion	huən	R	hwɛn
1840	屐	梗	陌	群	<i>kaikou</i>	3	<i>ru</i>	giək	giak	kik	H	kuik
1841	帕	假	麻	滂	<i>kaikou</i>	2	<i>qu</i>	p ^h yæ	p ^h ya	p ^h a	R	p ^h a
1842	帨	蟹	祭	書	<i>hekou</i>	3	<i>qu</i>	ɕ ^w iɛi	ɕ ^w iei	siəi	R	se
1843	衾	深	侵	溪	<i>kaikou</i>	3B	<i>ping</i>	k ^h yim	k ^h yim	kim	L	kum

³⁷⁹Also [koa](R tone)(MC: 假麻溪合 2 去 [k^{hw}yæ][k^{hw}ya])

1844	被	止	支	並	<i>kaikou</i>	3B	<i>qu</i>	b ^y iɛ	b ^y ie	p ^h i	R	p ^h i
1845	紳	臻	真	書	<i>kaikou</i>	3	<i>ping</i>	ɛin	ɛin	sin	L	sin
1846	帶	蟹	泰	端	<i>kaikou</i>	1	<i>qu</i>	tai	tai	tai	R	tæ
1847	鈐	假	麻	溪	<i>hekou</i>	2	<i>shang</i>	k ^{hw} æ	k ^{hw} a	koa	R	kwa
1848	靽	梗	青	透	<i>kaikou</i>	4	<i>ping</i>	t ^h ɛŋ	t ^h ɛŋ	tiəŋ	L	tɛʌŋ
1849	笏	臻	沒	曉	<i>hekou</i>	1	<i>ru</i>	hɤot	hɤot	hol	H	hol
1850	佩	蟹	灰	並	<i>kaikou</i>	1	<i>qu</i>	boi	boi	p ^h ai	R	p ^h æ
1851	繚	效	豪	透	<i>kaikou</i>	1	<i>ping</i>	t ^h au	t ^h au	t ^h io	L	tso
1852	縊	止	脂	邪	<i>hekou</i>	3	<i>qu</i>	z ^w i	z ^w i	siu	R	su
1853	紐	流	尤	娘	<i>kaikou</i>	3	<i>shang</i>	ŋju	ŋəu	niu	R	nju
1854	紉	流	侯	溪	<i>kaikou</i>	1	<i>qu</i>	k ^h u	k ^h u	ku	H	ku
1855	綏	止	脂	日	<i>hekou</i>	3	<i>ping</i>	ŋ ^w i	ŋ ^w i	ziu	L	ju
1856	纓	梗	清	影	<i>hekou</i>	3A	<i>ping</i>	ʔiɛŋ	ʔiɛŋ	iəŋ	L	jʌŋ
1857	袈	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	k ^y æ	k ^y a	ka	L	ka
1858	袈	假	麻	生	<i>kaikou</i>	2	<i>ping</i>	ʃ ^y æ	ʃ ^y a	sa	L	sa
1859	衲	咸	合	泥	<i>kaikou</i>	1	<i>ru</i>	nəp	nəp	nap	H	nap
1860	襖	效	豪	影	<i>kaikou</i>	1	<i>shang</i>	ʔau	ʔau	o	R	o
1861	襠	宕	陽	見	<i>kaikou</i>	3	<i>shang</i>	kiaŋ	kiaŋ	kaŋ	R	kaŋ
1862	裸	效	豪	幫	<i>kaikou</i>	1	<i>shang</i>	pau	pau	po	R	po
1863	褌	假	麻	從	<i>kaikou</i>	3	<i>qu</i>	dziæ	dzia	tsia	R	tɛa

1864	棚	梗	耕	幫	<i>kaikou</i>	2	<i>ping</i>	p ^ʷ ɛŋ	p ^ʷ ɛŋ	pɪŋ	L	pʊŋ
1865	領	梗	清	來	<i>kaikou</i>	3	<i>shang</i>	liɛŋ	liɛŋ	liəŋ	R	ljʌŋ
1866	襪	曾	職	見	<i>kaikou</i>	3	<i>ru</i>	kɪk	kiək	kɪk	H	kuək
1867	襟	深	侵	見	<i>kaikou</i>	3B	<i>ping</i>	k ^ʷ im	k ^ʷ im	kim	L	kuɪm
1868	袵	深	侵	日	<i>kaikou</i>	3	<i>shang</i>	ŋim	ŋim	zim	H	im
1869	袂	咸	洽	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʷ ɛp	k ^ʷ ɛp	hiəp	H	hjʌp
1870	禪	山	寒	端	<i>kaikou</i>	1	<i>ping</i>	tan	tan	tan	L	tan
1871	緼	臻	文	影	<i>hekou</i>	3	<i>qu</i>	ʔiun	ʔiun	on	R	on
1872	襴	山	先	見	<i>kaikou</i>	4	<i>shang</i>	ken	ken	kiən	R	kjʌn
1873	絲	止	之	心	<i>kaikou</i>	3	<i>ping</i>	sɪ	sə	sʌ	L	sa
1874	線	山	仙	心	<i>kaikou</i>	3	<i>qu</i>	siɛn	sien	siən	R	sʌn
1875	縷	遇	虞	來	<i>hekou</i>	3	<i>shang</i>	liɤo	liɤo	lu	L	lu
1876	縷	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lɤo	lɤo	lo	L	lo
1877	續	宕	唐	溪	<i>hekou</i>	1	<i>qu</i>	k ^{hw} ɑŋ	k ^{hw} ɑŋ	koɑŋ	R	kwaŋ
1878	絮	遇	魚	心	<i>hekou</i>	3	<i>qu</i>	sɪɾ	sio	siə	R	sʌ
1879	綿	山	仙	明	<i>kaikou</i>	3A	<i>ping</i>	miɛn	mien	miən	L	mjʌn
1880	繭	山	先	見	<i>kaikou</i>	4	<i>shang</i>	ken	ken	kiən	R	kjʌn
1881	簪	深	侵	莊	<i>kaikou</i>	3	<i>ping</i>	tɕim	tɕim	tsʌm	L	team
1882	筭	蟹	齊	見	<i>kaikou</i>	4	<i>ping</i>	kei	kei	kiəi	L	kje
1883	鑊	蟹	齊	幫	<i>kaikou</i>	4	<i>ping</i>	pei	pei	pi	L	pi

1884	釵	蟹	佳	初	<i>kaikou</i>	2	<i>ping</i>	tɕ ^h ɿɛ	tɕ ^h ɿe	ts ^h a	L	tɕ ^h a
1885	珥	止	之	日	<i>kaikou</i>	3	<i>qu</i>	ŋi	ŋə	zi	R	i
1886	璫	宕	唐	端	<i>kaikou</i>	1	<i>ping</i>	taŋ	taŋ	taŋ	L	taŋ
1887	釧	山	仙	昌	<i>hekou</i>	3	<i>qu</i>	tɕ ^{hw} iɛn	tɕ ^{hw} iɛn	ts ^h iən	R	tɕ ^h ʌn
1888	環	山	刪	匣	<i>hekou</i>	2	<i>ping</i>	ɸ ^w ɿæn	ɸ ^w ɿan	hoan	L	hwan
1889	脂	止	脂	章	<i>kaikou</i>	3	<i>ping</i>	tɕi	tɕi	tsi	L	tɕi
1890	膏	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	kau	kau	ko	L	ko
1891	綢	山	先	影	<i>kaikou</i>	4	<i>ping</i>	ʔen	ʔen	iən	L	ʃʌn
1892	絳	止	脂	章	<i>kaikou</i>	3	<i>ping</i>	tɕi	tɕi	tsi	L	tɕi
1893	髮	止	支	並	<i>kaikou</i>	3B	<i>qu</i>	b ^ɿ iɛ	b ^ɿ ie	p ^h i	L	p ^h i
1894	髭	蟹	齊	定	<i>kaikou</i>	4	<i>qu</i>	dei	dei	t ^h iəi	L	tɕ ^h e
1895	髻	蟹	齊	見	<i>kaikou</i>	4	<i>qu</i>	kei	kei	kiəi	H	kje
1896	鬢	山	刪	匣	<i>hekou</i>	2	<i>ping</i>	ɸ ^w ɿæn	ɸ ^w ɿan	hoan	L	hwan
1897	舟	流	尤	章	<i>kaikou</i>	3	<i>ping</i>	tɕiu	tɕəu	tsiu	L	tɕeu
1898	船	山	仙	船	<i>hekou</i>	3	<i>ping</i>	z ^w iɛn	z ^w iɛn	siən	L	sʌn
1899	艇	梗	青	定	<i>kaikou</i>	4	<i>shang</i>	dɛŋ	dɛŋ	tiəŋ	R	tɕʌŋ
1900	艘	效	豪	心	<i>kaikou</i>	1	<i>ping</i>	sau	sau	su	H	su
1901	帆	咸	凡	奉	<i>hekou</i>	3	<i>ping</i>	bɸiam	bɸiam	pəm	L	pʌm
1902	篷	通	東	並	<i>hekou</i>	1	<i>ping</i>	bun	bun	pon	L	pon
1903	桅	蟹	灰	疑	<i>hekou</i>	1	<i>ping</i>	ŋoi	ŋoi	ui	L	ui

1904	檣	宕	陽	從	<i>kaikou</i>	3	<i>ping</i>	dziaŋ	dziaŋ	tsiaŋ	L	teɑŋ
1905	纜	咸	談	來	<i>kaikou</i>	1	<i>qu</i>	lam	lam	lam	R	lam
1906	碇	梗	青	端	<i>kaikou</i>	4	<i>qu</i>	teŋ	teŋ	tiəŋ	H	teʌŋ
1907	艣	遇	模	來	<i>hekou</i>	1	<i>shang</i>	lɤo	lɤo	no	H	no
1908	舵	果	歌	定	<i>kaikou</i>	1	<i>shang</i>	da	da	tʰa	R	tʰa
1909	簪	蟹	佳	並	<i>kaikou</i>	2	<i>ping</i>	bʷɛ	bʷe	pʰai	L	pʰæ
1910	筏	山	月	奉	<i>hekou</i>	3	<i>ru</i>	bʷiɿt	bʷiot	pəl	H	pɒl
1911	舫	宕	陽	非	<i>kaikou</i>	3	<i>qu</i>	piaŋ	piaŋ	paŋ	L	paŋ
1912	航	宕	唐	匣	<i>kaikou</i>	1	<i>ping</i>	ɦaŋ	ɦaŋ	haŋ	L	haŋ
1913	篙	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	kau	kau	ko	L	ko
1914	舳	遇	模	曉	<i>hekou</i>	1	<i>shang</i>	hɤo	hɤo	ho	R	ho
1915	肥	假	麻	滂	<i>kaikou</i>	2	<i>ping</i>	pʰɤæ	pʰɤa	pʰa	L	pʰa
1916	舫	效	豪	端	<i>kaikou</i>	1	<i>ping</i>	tau	tau	to	L	to
1917	橈	效	宵	日	<i>kaikou</i>	3	<i>ping</i>	ŋiɛu	ŋieu	zio	L	jo
1918	楫	深	緝	從	<i>kaikou</i>	3	<i>ru</i>	dzip	dzip	tsip	R	teɥp
1919	棹	效	肴	澄	<i>kaikou</i>	2	<i>qu</i>	dʷæu	dʷau	to	R	to
1920	槳	宕	陽	精	<i>kaikou</i>	3	<i>ping</i>	tsiaŋ	tsiaŋ	tsiaŋ	L	teɑŋ
1921	舷	山	先	匣	<i>kaikou</i>	4	<i>ping</i>	ɦien	ɦien	hiəŋ	L	hjʌŋ
1922	艖	效	肴	生	<i>kaikou</i>	2	<i>ping</i>	ʂʷæu	ʂʷau	tsʰio	L	teʰo
1923	舳	通	屋	澄	<i>hekou</i>	3	<i>ru</i>	dʷiuk	dʷiuk	tʰiuk	H	teʰuk

1924	艫	遇	模	來	<i>hekou</i>	1	<i>ping</i>	l̥ɔ	l̥ɔ	lo	L	lo
1925	艦	咸	銜	匣	<i>kaikou</i>	2	<i>shang</i>	ɦ̥ʷæm	ɦ̥ʷam	ham	R	ham
1926	舶	梗	陌	並	<i>kaikou</i>	2	<i>ru</i>	b̥ʷæk	b̥ʷak	p̥ɿk	H	pæk
1927	槽	效	豪	從	<i>kaikou</i>	1	<i>ping</i>	dzau	dzau	tso	L	tso
1928	舩	山	先	並	<i>kaikou</i>	4	<i>shang</i>	ben	ben	pʰiən	R	pʰjɿn
1929	車	遇	魚	見	<i>hekou</i>	3	<i>ping</i>	kiɿ	kio	kə ³⁸⁰	L	kɿ
1930	輛	宕	陽	來	<i>kaikou</i>	3	<i>qu</i>	liən	liən	liən	R	ljən
1931	輜	止	之	莊	<i>kaikou</i>	3	<i>ping</i>	tʂi	tʂə	tsʰi	L	tɕʰi
1932	駟	梗	青	並	<i>kaikou</i>	4	<i>ping</i>	beŋ	beŋ	piən	L	pjɿn
1933	輜	效	宵	群	<i>kaikou</i>	3B	<i>qu</i>	g̥ʷiɛu	g̥ʷiɛu	kio	R	kjo
1934	輿	遇	魚	以	<i>hekou</i>	3	<i>ping</i>	jiɿ	jio	iə	L	jɿ
1935	輅	遇	模	來	<i>hekou</i>	1	<i>qu</i>	l̥ɔ	l̥ɔ	lo	H	lo
1936	輦	山	仙	來	<i>kaikou</i>	3	<i>shang</i>	liɛn	lien	liən	H	ljɿn
1937	輶	山	元	敷	<i>hekou</i>	3	<i>ping</i>	pʰw̥iɿn	pʰw̥iɿn	pən	L	pɿn
1938	輶	山	元	云	<i>hekou</i>	3	<i>ping</i>	ɦ̥w̥iɿn	ɦ̥w̥iɿn	uən	L	wɿn
1939	輶	梗	麥	影	<i>kaikou</i>	2	<i>ru</i>	ʔ̥ʷɛk	ʔ̥ʷɛk	ɿk	H	æk
1940	輶	流	尤	知	<i>kaikou</i>	3	<i>ping</i>	t̥iu	t̥iəu	tiu	L	tsu
1941	輶	山	桓	見	<i>hekou</i>	1	<i>shang</i>	kʷan	kʷan	koan	H	kwan

³⁸⁰ Also [tsʰiɿ] (L tone)(假麻昌開 3 平 [tɕʰiɿ] [tɕʰiɿ] [tɕʰa])

1942	轄	山	鎔	匣	<i>kaikou</i>	2	<i>ru</i>	fi [˥] æn	fi [˥] an	hal	H	hal
1943	軸	通	屋	澄	<i>hekou</i>	3	<i>ru</i>	ɕiuk	ɕiuk	tʰiuk	H	tɕʰuk
1944	轂	通	屋	見	<i>hekou</i>	1	<i>ru</i>	kuk	kuk	kok	H	kok
1945	軺	效	宵	以	<i>kaikou</i>	3	<i>ping</i>	jiɛu	jieu	io	L	jo
1946	輻	宕	陽	見	<i>kaikou</i>	3	<i>ping</i>	kiaŋ	kiaŋ	kaŋ	L	kaŋ
1947	輪	臻	諄	來	<i>hekou</i>	3	<i>ping</i>	l ^w in	l ^w in	liun	L	ljun
1948	輔	遇	虞	奉	<i>hekou</i>	3	<i>shang</i>	biɤo	biɤo	po	R	po
1949	輞	宕	陽	微	<i>kaikou</i>	3	<i>shang</i>	miaŋ	miaŋ	maŋ	H	maŋ
1950	輅	遇	魚	群	<i>hekou</i>	3	<i>ping</i>	giɤ	gio	kə	L	kʌ
1951	輅	效	豪	來	<i>kaikou</i>	1	<i>shang</i>	lau	lau	lio	R	ljo
1952	輻	通	屋	非	<i>hekou</i>	3	<i>ru</i>	piuk	piuk	pok	H	pok
1953	鞍	山	寒	影	<i>kaikou</i>	1	<i>ping</i>	ʔan	ʔan	an	L	an
1954	輜	效	宵	溪	<i>kaikou</i>	3B	<i>ping</i>	kʰy̯iɛu	kʰy̯ieu	kio	L	kjo
1955	輶	咸	添	定	<i>kaikou</i>	4	<i>shang</i>	dem	dem	tiəm	R	tɕʌm
1956	珂	果	歌	溪	<i>kaikou</i>	1	<i>ping</i>	kʰa	kʰa	ka	L	ka
1957	輶	咸	鹽	昌	<i>kaikou</i>	3	<i>qu</i>	tɕʰiɛm	tɕʰiem	tsʰiəm	L	tɕʰʌm
1958	輶	蟹	祭	以	<i>kaikou</i>	3	<i>qu</i>	jiɛi	jiei	tʰiəi	H	je
1959	輶	流	尤	清	<i>kaikou</i>	3	<i>ping</i>	tsʰiu	tsʰiəu	tsʰiu	L	tɕʰu
1960	輶	宕	陽	昌	<i>kaikou</i>	3	<i>ping</i>	tɕʰiaŋ	tɕʰiaŋ	tsiaŋ	L	tɕʌŋ
1961	輶	通	東	溪	<i>hekou</i>	1	<i>qu</i>	kʰuŋ	kʰuŋ	koŋ	R	koŋ

1962	勒	曾	德	來	<i>kaikou</i>	1	<i>ru</i>	lək	lək	lik	L	luk
1963	鞮	止	微	見	<i>kaikou</i>	3	<i>ping</i>	kii	kəi	kii	L	ki
1964	鞮	通	東	來	<i>hekou</i>	1	<i>ping</i>	luŋ	luŋ	loŋ	L	loŋ
1965	轡	止	脂	幫	<i>kaikou</i>	3B	<i>qu</i>	p ^ʷ i	p ^ʷ i	pi	R	pi
1966	靶	假	麻	幫	<i>kaikou</i>	2	<i>qu</i>	p ^ʷ æ	p ^ʷ a	p ^h a	R	p ^h a
1967	𢆶	梗	錫	端	<i>kaikou</i>	4	<i>ru</i>	tek	tek	tiək	H	tɕək
1968	鞮	宕	陽	見	<i>kaikou</i>	3	<i>ping</i>	kiaŋ	kiaŋ	kaŋ	L	kaŋ
1969	銜	咸	銜	匣	<i>kaikou</i>	2	<i>ping</i>	fi ^ʷ æm	fi ^ʷ am	ham	L	ham
1970	鑣	效	宵	幫	<i>kaikou</i>	3B	<i>ping</i>	p ^ʷ iɛu	p ^ʷ iɛu	p ^h io	L	p ^h jo
1971	鐙	曾	登	端	<i>kaikou</i>	1	<i>qu</i>	təŋ	təŋ	tiŋ	R	tuŋ
1972	𢆶	山	薛	章	<i>kaikou</i>	3	<i>ru</i>	tɕiɛt	tɕiɛt	tsiəl	H	tɕəl
1973	鞭	山	仙	幫	<i>kaikou</i>	3A	<i>ping</i>	piɛn	piɛn	p ^h iɛn	L	p ^h jɛn
1974	𢆶	假	麻	知	<i>hekou</i>	2	<i>ping</i>	t ^ʷ æ	t ^ʷ a	tsoa	L	kwa
1975	箠	止	支	章	<i>hekou</i>	3	<i>ping</i>	tɕ ^ʷ iɛ	tɕ ^ʷ iɛ	ts ^h iuiəi	R	tɕ ^h u
1976	策	梗	麥	初	<i>kaikou</i>	2	<i>ru</i>	tɕ ^h ɛk	tɕ ^h ɛk	ts ^h ɛik	H	tɕ ^h æk
1977	干	山	寒	見	<i>kaikou</i>	1	<i>ping</i>	kan	kan	kan	L	kan
1978	櫓	遇	模	來	<i>hekou</i>	1	<i>shang</i>	lɔo	lɔo	lo	R	lo
1979	盾	臻	諄	船	<i>hekou</i>	3	<i>shang</i>	z ^ʷ in	z ^ʷ in	siun	R	sun
1980	𢆶	山	月	奉	<i>hekou</i>	3	<i>ru</i>	b ^ʷ iɪt	b ^ʷ iot	pəl	H	pəl
1981	戈	果	戈	見	<i>hekou</i>	1	<i>ping</i>	k ^ʷ a	k ^ʷ a	koa	L	kwa

1982	矛	流	尤	明	<i>kaikou</i>	3	<i>ping</i>	miu	məu	mo	L	mo
1983	劍	咸	嚴	見	<i>kaikou</i>	3	<i>qu</i>	kiam	kiam	kəm	R	kəm
1984	戟	梗	陌	見	<i>kaikou</i>	3	<i>ru</i>	kiæk	kiak	kik	H	kuuk
1985	槍	宕	陽	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iaŋ	ts ^h iaŋ	ts ^h aŋ	L	te ^h aŋ
1986	槩	江	覺	生	<i>kaikou</i>	2	<i>ru</i>	ɕ ^ʷ ək	ɕ ^ʷ ok	sak	H	sak
1987	鋒	通	鍾	敷	<i>hekou</i>	3	<i>ping</i>	p ^h iɰŋ	p ^h iɰŋ	poŋ	L	poŋ
1988	鏢	宕	鐸	疑	<i>kaikou</i>	1	<i>ru</i>	ŋak	ŋak	ak	H	ak
1989	鎬	咸	覃	匣	<i>kaikou</i>	1	<i>ping</i>	fəm	fəm	hap	L	ham
1990	鉞	咸	帖	見	<i>kaikou</i>	4	<i>ru</i>	kep	kep	hiəp	H	hjaɸ
1991	鉞	山	月	云	<i>hekou</i>	3	<i>ru</i>	f ^w iɰt	f ^w iot	uəl	H	wəl
1992	鉞	梗	錫	清	<i>kaikou</i>	4	<i>ru</i>	ts ^h ek	ts ^h ek	ts ^h iək	H	te ^h ək
1993	銃	通	東	昌	<i>hekou</i>	3	<i>qu</i>	te ^h iun	te ^h iun	ts ^h iun	L	te ^h un
1994	砲	效	肴	滂	<i>kaikou</i>	2	<i>qu</i>	p ^h æu	p ^h au	p ^h o	R	p ^h o
1995	鼓	遇	模	見	<i>hekou</i>	1	<i>shang</i>	kɰo	kɰo	ko	H	ko
1996	輦	蟹	齊	並	<i>kaikou</i>	4	<i>ping</i>	bei	bei	pi	L	pi
1997	甲	咸	狎	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʷ æp	k ^ʷ ap	kap	H	kap
1998	鎧	蟹	哈	溪	<i>kaikou</i>	1	<i>shang</i>	k ^h əi	k ^h əi	kai	R	kæ
1999	胄	流	尤	澄	<i>kaikou</i>	3	<i>qu</i>	dju	djəu	tiu	R	teu
2000	鍙	流	尤	明	<i>kaikou</i>	3	<i>ping</i>	miu	məu	mo	L	mo
2001	弓	通	東	見	<i>hekou</i>	3	<i>ping</i>	kiun	kiun	kuŋ	L	kuŋ

2002	弧	遇	模	匣	hekou	1	ping	ɦʊo	ɦʊo	ho	L	ho
2003	弩	遇	模	泥	hekou	1	shang	nʊo	nʊo	no	R	no
2004	弦	山	先	匣	kaikou	4	ping	ɦien	ɦien	hiən	L	ɦjʌn
2005	弨	效	肴	生	kaikou	2	ping	ɕʰæu	ɕʰau	sio	L	so
2006	弭	止	支	明	kaikou	3A	ping	miɛ	mie	mi	R	mi
2007	弭	假	麻	幫	kaikou	2	qu	pʰæ	pʰa	pʰa	R	pʰa
2008	彊	流	侯	溪	kaikou	1	ping	kʰu	kʰu	ku	L	ku
2009	𢇛	山	屑	見	kaikou	4	ru	ket	ket	kiəl	H	kjʌl
2010	𢇛	咸	葉	書	kaikou	3	ru	ɕʰiɛp	ɕʰiɛp	siəp	H	sʌp
2011	𢇛	山	寒	匣	kaikou	1	qu	ɦan	ɦan	han	R	han
2012	𢇛	流	侯	見	kaikou	1	ping	ku	ku	ku	L	ku
2013	𢇛	梗	清	章	kaikou	3	ping	tɕiɛŋ	tɕiɛŋ	tsiəŋ	L	tɕɛŋ
2014	𢇛	梗	錫	端	kaikou	4	ru	tek	tek	tiək	H	tɕɛk
2015	𢇛	曾	登	並	kaikou	1	ping	bəŋ	bəŋ	piŋ	L	puŋ
2016	𢇛	流	侯	匣	kaikou	1	ping	ɦu	ɦu	hu	L	hu
2017	𢇛	梗	青	來	kaikou	4	ping	leŋ	leŋ	liəŋ	L	ljʌŋ
2018	𢇛	江	覺	並	kaikou	2	ru	bʰɔk	bʰok	pak	H	pak
2019	𢇛	效	肴	曉	kaikou	2	ping	hʰæu	hʰau	ho	R	ho
2020	𢇛	止	脂	並	kaikou	3A	ping	bi	bi	pʰi	L	pi
2020	𢇛	江	覺	並	kaikou	2	ru	bʰɔk	bʰok	pak	H	pak

2021	鏃	通	屋	精	<i>hekou</i>	1	<i>ru</i>	<i>tsuk</i>	<i>tsuk</i>	<i>tsok</i>	H	<i>tɕok</i>
2022	鏃	梗	錫	端	<i>kaikou</i>	4	<i>ru</i>	<i>tek</i>	<i>tek</i>	<i>tiək</i>	H	<i>tɕək</i>
2024	鏃	流	侯	匣	<i>kaikou</i>	1	<i>qu</i>	<i>ɦu</i>	<i>ɦu</i>	<i>hu</i>	L	<i>hu</i>
2025	箭	山	仙	精	<i>kaikou</i>	3	<i>qu</i>	<i>tsiɛn</i>	<i>tsien</i>	<i>tsiən</i>	R	<i>tɕən</i>
2026	矢	止	脂	書	<i>kaikou</i>	3	<i>shang</i>	<i>ɕi</i>	<i>ɕi</i>	<i>si</i>	R	<i>si</i>
2027	筈	山	末	見	<i>hekou</i>	1	<i>ru</i>	<i>kʷan</i>	<i>kʷan</i>	<i>koal</i>	H	<i>kwal</i>
2028	筈	山	寒	見	<i>kaikou</i>	1	<i>shang</i>	<i>kan</i>	<i>kan</i>	<i>kan</i>	H	<i>kan</i>
2029	鉦	梗	清	章	<i>kaikou</i>	3	<i>ping</i>	<i>tɕiɛŋ</i>	<i>tɕieŋ</i>	<i>tsiəŋ</i>	L	<i>tɕəŋ</i>
2030	鑼	果	歌	來	<i>kaikou</i>	1	<i>ping</i>	<i>la</i>	<i>la</i>	<i>la</i>	L	<i>la</i>
2031	旗	止	之	群	<i>kaikou</i>	3	<i>ping</i>	<i>gɿ</i>	<i>gə</i>	<i>kii</i>	L	<i>ki</i>
2032	轟	通	沃	定	<i>hekou</i>	1	<i>ru</i>	<i>ɖʊk</i>	<i>ɖʊk</i>	<i>tɔk</i>	H	<i>tɔk</i>
2033	橐	效	豪	見	<i>kaikou</i>	1	<i>ping</i>	<i>kau</i>	<i>kau</i>	<i>ko</i>	L	<i>ko</i>
2034	鞬	山	元	見	<i>kaikou</i>	3	<i>ping</i>	<i>kiɻn</i>	<i>kion</i>	<i>kən</i>	L	<i>kən</i>
2035	鞮	通	屋	定	<i>hekou</i>	1	<i>ru</i>	<i>ɖuk</i>	<i>ɖuk</i>	<i>tɔk</i>	L	<i>tɔk</i>
2036	鞞	宕	陽	徹	<i>kaikou</i>	3	<i>qu</i>	<i>ʈʰiaŋ</i>	<i>ʈʰiaŋ</i>	<i>ʈʰiaŋ</i>	R	<i>tɕʰaŋ</i>
2037	鞞	遇	模	並	<i>hekou</i>	1	<i>qu</i>	<i>bʊo</i>	<i>bʊo</i>	<i>po</i>	R	<i>po</i>
2038	鞞	假	麻	初	<i>kaikou</i>	2	<i>ping</i>	<i>tɕʰʏæ</i>	<i>tɕʰʏa</i>	<i>tsʰa</i>	L	<i>tɕʰa</i>
2039	筈	遇	模	匣	<i>hekou</i>	1	<i>ping</i>	<i>ɦʊo</i>	<i>ɦʊo</i>	<i>ho</i>	L	<i>ho</i>
2040	簏	通	屋	來	<i>hekou</i>	1	<i>ru</i>	<i>luk</i>	<i>luk</i>	<i>lok</i>	L	<i>lok</i>
2041	堊	宕	鐸	影	<i>kaikou</i>	1	<i>ru</i>	<i>ʔak</i>	<i>ʔak</i>	<i>ak</i>	H	<i>ak</i>

2042	素	遇	模	心	<i>hekou</i>	1	<i>qu</i>	sʊo	sʊo	so	H	so
2043	粉	臻	文	非	<i>hekou</i>	3	<i>shang</i>	piun	piun	pun	H	pun
2044	白	梗	陌	並	<i>kaikou</i>	2	<i>ru</i>	b ^ʷ æk	b ^ʷ ak	pɿk	H	pæk
2045	靛	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	H	tɛɿn
2046	青	梗	青	清	<i>kaikou</i>	4	<i>ping</i>	ts ^h ɛŋ	ts ^h ɛŋ	ts ^h iɛŋ	L	tɛ ^h ɿŋ
2047	黛	蟹	哈	定	<i>kaikou</i>	1	<i>shang</i>	dəi	dəi	tɿ	R	tæ
2048	黑	曾	德	曉	<i>kaikou</i>	1	<i>ru</i>	hək	hək	hik	H	huək
2049	玄	山	先	匣	<i>hekou</i>	4	<i>ping</i>	f ^ʷ en	f ^ʷ en	hiən	L	hɿɿn
2050	皂	效	豪	從	<i>kaikou</i>	1	<i>shang</i>	dzau	dzau	tso	R	tɛo
2051	丹	山	寒	端	<i>kaikou</i>	1	<i>ping</i>	tan	tan	tan	L	tan
2052	腹	宕	鐸	影	<i>hekou</i>	1	<i>ru</i>	ʔ ^w ak	ʔ ^w ak	hoak	L	hwak
2053	彤	通	冬	定	<i>hekou</i>	1	<i>ping</i>	dʊŋ	dʊŋ	toŋ	L	toŋ
2054	赭	假	麻	章	<i>kaikou</i>	3	<i>shang</i>	tɕiæ	tɕia	tsia	R	tɕea
2055	頰	梗	清	徹	<i>kaikou</i>	3	<i>ping</i>	t ^h iɛŋ	t ^h iɛŋ	tiɛŋ	L	tɛɿŋ
2056	赤	梗	昔	昌	<i>kaikou</i>	3	<i>ru</i>	tɕ ^h iɛk	tɕ ^h iɛk	tsiək	H	tɛɿk
2057	朱	遇	虞	章	<i>hekou</i>	3	<i>ping</i>	tɕiɿo	tɕiɿo	tsiu	L	tɕeu
2058	緋	止	微	非	<i>kaikou</i>	3	<i>ping</i>	pɿi	pɿi	pɿ	L	pæ
2059	紅	通	東	匣	<i>hekou</i>	1	<i>ping</i>	f ^ʷ uŋ	f ^ʷ uŋ	hoŋ	L	hoŋ
2060	絳	江	江	見	<i>kaikou</i>	2	<i>qu</i>	kɔŋ	kɔŋ	kaŋ	R	kaŋ
2061	黃	宕	唐	匣	<i>hekou</i>	1	<i>ping</i>	f ^ʷ aŋ	f ^ʷ aŋ	hoan	L	hwan

2062	紫	止	支	精	<i>kaikou</i>	3	<i>shang</i>	tsiɛ	tsie	tsʌ	R	tea
2063	綠	通	燭	來	<i>hekou</i>	3	<i>ru</i>	liɯɔk	liɯok	lok	H	lok
2064	碧	梗	陌	幫	<i>kaikou</i>	3	<i>ru</i>	piæk	piak	piək	H	pjʌk
2065	紗	假	麻	生	<i>kaikou</i>	2	<i>ping</i>	ʂʷæ	ʂʷa	sa	L	sa
2066	羅	果	歌	來	<i>kaikou</i>	1	<i>ping</i>	la	la	la	L	la
2067	綾	曾	蒸	來	<i>kaikou</i>	3	<i>ping</i>	liŋ	liəŋ	liŋ	L	luŋ
2068	段	山	桓	定	<i>hekou</i>	1	<i>qu</i>	dʷan	dʷan	tan	R	tan
2069	縑	咸	添	見	<i>kaikou</i>	4	<i>ping</i>	kem	kem	kiəm	L	kjʌm
2070	絕	止	支	書	<i>kaikou</i>	3	<i>ping</i>	ɕiɛ	ɕie	si	L	si
2071	布	遇	模	幫	<i>hekou</i>	1	<i>qu</i>	pɯo	pɯo	pʰo	H	pʰo
2072	帛	梗	陌	並	<i>kaikou</i>	2	<i>ru</i>	bʷæk	bʷak	pʌik	H	pæk
2073	襪	遇	模	明	<i>hekou</i>	1	<i>ping</i>	mɯo	mɯo	mo	L	mo
2074	駝	山	曷	匣	<i>kaikou</i>	1	<i>ru</i>	ɦat	ɦat	kal	H	kal
2075	氈	山	仙	章	<i>kaikou</i>	3	<i>ping</i>	tɕiɛn	tɕien	tsiən	L	tɕʌn
2076	毯	咸	談	透	<i>kaikou</i>	1	<i>shang</i>	tʰam	tʰam	tam	R	tam
2077	綈	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tɕe
2078	繒	曾	蒸	從	<i>kaikou</i>	3	<i>ping</i>	dziŋ	dziəŋ	tsiŋ	L	tɕuŋ
2079	絺	止	脂	徹	<i>kaikou</i>	3	<i>ping</i>	tʰi	tʰi	tʰi	L	tɕeʰi
2080	綌	梗	陌	溪	<i>kaikou</i>	3	<i>ru</i>	kʰiæk	kʰiak	kiək	H	kjʌk
2081	紬	山	桓	匣	<i>hekou</i>	1	<i>ping</i>	ɦʷan	ɦʷan	hoan	L	hwan

2082	綺	止	支	溪	<i>kaikou</i>	3B	<i>shang</i>	k ^h ɿɛ	k ^h ɿɛ	kii	R	ki
2083	綃	效	宵	心	<i>kaikou</i>	3	<i>ping</i>	sieu	sieu	ts ^h io	L	tɛ ^h o
2084	絹	山	仙	見	<i>hekou</i>	3A	<i>qu</i>	k ^w iɛn	k ^w iɛn	kiən	R	kjʌn
2085	錦	深	侵	見	<i>kaikou</i>	3B	<i>shang</i>	k ^ɿ im	k ^ɿ im	kim	R	kum
2086	紬	流	尤	澄	<i>kaikou</i>	3	<i>ping</i>	d̪iu	d̪iəu	tiu	L	tɛu
2087	縐	流	尤	莊	<i>kaikou</i>	3	<i>qu</i>	t̪siu	t̪səu	ts ^h u	L	tɛ ^h u
2088	穀	通	屋	匣	<i>hekou</i>	1	<i>ru</i>	fuk	fuk	kok	H	kok
2089	寶	效	豪	幫	<i>kaikou</i>	1	<i>shang</i>	pau	pau	po	R	po
2090	貝	蟹	泰	幫	<i>kaikou</i>	1	<i>qu</i>	pai	pai	p ^h ai	R	p ^h æ
2091	錢	山	仙	從	<i>kaikou</i>	3	<i>ping</i>	dziɛn	dzien	tsiən	L	tɛʌn
2092	鈔	效	肴	初	<i>kaikou</i>	2	<i>ping</i>	t̪s ^h ɿæu	t̪s ^h ɿau	ts ^h io	L	tɛ ^h o
2093	金	深	侵	見	<i>kaikou</i>	3B	<i>ping</i>	k ^ɿ im	k ^ɿ im	kim	L	kum
2094	銀	臻	真	疑	<i>kaikou</i>	3B	<i>ping</i>	ŋ ^ɿ in	ŋ ^ɿ in	in	L	uun
2095	珠	遇	虞	章	<i>hekou</i>	3	<i>ping</i>	teiɯo	teiɯo	tsiu	L	tɛu
2096	玉	通	燭	疑	<i>hekou</i>	3	<i>ru</i>	ŋiɯok	ŋiɯok	ok	H	ok
2097	銅	通	東	定	<i>hekou</i>	1	<i>ping</i>	dun̚	dun̚	ton̚	L	ton̚
2098	鐵	山	屑	透	<i>kaikou</i>	4	<i>ru</i>	t ^h et	t ^h et	t ^h iəl	H	tɛ ^h ʌl
2099	鎗	流	侯	透	<i>kaikou</i>	1	<i>ping</i>	t ^h u	t ^h u	tiu	L	ju
2100	鉈	梗	昔	禪	<i>kaikou</i>	3	<i>ru</i>	dziɛk	dziek	siək	H	sək
2101	汞	通	東	匣	<i>hekou</i>	1	<i>shang</i>	fun̚	fun̚	hon̚	R	hon̚

2102	鉛	山	仙	以	hekou	3	ping	j ^w iɛn	j ^w iɛn	iən	L	jʌn
2103	鑷	咸	盍	來	kaikou	1	ru	lap	lap	lap	H	lap
2104	錫	梗	錫	心	kaikou	4	ru	sek	sek	siək	H	sʌk
2105	瓊	梗	清	群	hekou	3A	ping	giɛŋ	giɛŋ	kiəŋ	L	kjʌŋ
2106	瑤	效	宵	以	kaikou	3	ping	jiɛu	jiɛu	io	L	jo
2107	瓔	梗	清	影	hekou	3A	ping	ʔiɛŋ	ʔiɛŋ	iəŋ	L	jʌŋ
2108	珞	宕	鐸	來	kaikou	1	ru	lak	lak	lak	H	lak
2109	珍	臻	真	知	kaikou	3	ping	ʈin	ʈin	tin	L	tɛin
2110	玼	山	先	並	kaikou	4	ping	ben	ben	piən	L	pin
2111	璣	止	微	群	kaikou	3	qu	gi	gəi	kii	H	ki
2112	璧	梗	昔	幫	kaikou	3A	ru	piɛk	piek	piək	H	pjʌk
2113	珊	山	寒	心	kaikou	1	ping	san	san	san	L	san
2114	瑚	遇	模	匣	hekou	1	ping	ɦʊo	ɦʊo	ho	L	ho
2115	瑪	假	麻	明	kaikou	2	shang	m ^y æ	m ^y a	ma	R	ma
2116	瑙	效	豪	泥	kaikou	1	shang	nau	nau	no	R	no
2117	琉	流	尤	來	kaikou	3	ping	liu	ləu	liu	L	lju
2118	璃	止	支	來	kaikou	3	ping	liɛ	lie	li	L	li
2119	琥	遇	模	曉	hekou	1	shang	ɦʊo	ɦʊo	ho	R	ho
2120	珀	梗	陌	滂	kaikou	2	ru	p ^h yæk	p ^h yak	pʌik	L	pæk
2121	琵琶	止	脂	並	kaikou	3A	ping	bi	bi	pi	L	pi

2122	琶	假	麻	並	<i>kaikou</i>	2	<i>ping</i>	b ^y æ	b ^y a	p ^h a	L	p ^h a
2123	鐘	通	鍾	章	<i>hekou</i>	3	<i>ping</i>	teiɿɔŋ	teiɿɔŋ	tsion	L	teon
2124	磬	梗	青	溪	<i>kaikou</i>	4	<i>qu</i>	k ^h ɛŋ	k ^h ɛŋ	kiəŋ	R	kjʌŋ
2125	琴	深	侵	群	<i>kaikou</i>	3B	<i>ping</i>	g ^y im	g ^y im	kim	L	kum
2126	瑟	臻	櫛	生	<i>kaikou</i>	3	<i>ru</i>	ʂit	ʂit	sil	H	sul
2127	筊	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	k ^y æ	k ^y a	ka	L	ka
2128	拍	梗	陌	滂	<i>kaikou</i>	2	<i>ru</i>	p ^h yæk	p ^h yak	pʌik	H	pæk
2129	笙	梗	庚	生	<i>kaikou</i>	2	<i>ping</i>	ʂ ^y æŋ	ʂ ^y aŋ	sʌiŋ	L	sæŋ
2130	簫	效	蕭	心	<i>kaikou</i>	4	<i>ping</i>	seu	seu	sio	L	so
2131	管	山	桓	見	<i>hekou</i>	1	<i>shang</i>	k ^w an	k ^w an	koan	H	kwan
2132	簫	宕	藥	以	<i>kaikou</i>	3	<i>ru</i>	jiak	jiak	iak	L	jak
2133	磬	臻	質	幫	<i>kaikou</i>	3A	<i>ru</i>	pit	pit	p ^h il	H	p ^h il
2134	簞	臻	質	來	<i>kaikou</i>	3	<i>ru</i>	lit	lit	liul	H	ljul
2135	箏	梗	耕	莊	<i>kaikou</i>	2	<i>ping</i>	tɕ ^y ɛŋ	tɕ ^y ɛŋ	tsʌiŋ	L	teæŋ
2136	笛	梗	錫	定	<i>kaikou</i>	4	<i>ru</i>	dek	dek	tiək	H	teʌk
2137	疾	臻	質	從	<i>kaikou</i>	3	<i>ru</i>	dzit	dzit	tsil	H	teil
2138	病	梗	庚	並	<i>kaikou</i>	3	<i>qu</i>	biæŋ	bian	piəŋ	R	pjʌŋ
2139	疼	通	冬	定	<i>hekou</i>	1	<i>ping</i>	dɿɔŋ	dɿɔŋ	ton	L	ton
2140	痛	通	東	透	<i>hekou</i>	1	<i>qu</i>	t ^h uŋ	t ^h uŋ	t ^h on	R	t ^h on
2141	吐	遇	模	透	<i>hekou</i>	1	<i>qu</i>	t ^h ɿo	t ^h ɿo	t ^h o	H	t ^h o

2142	瀉	假	麻	心	<i>kaikou</i>	3	<i>qu</i>	siæ	sia	sia	R	sa
2143	嘔	流	侯	影	<i>kaikou</i>	1	<i>shang</i>	ʔu	ʔu	ku	R	ku
2144	噉	梗	陌	疑	<i>kaikou</i>	3	<i>ru</i>	ɲiæk	ɲiak	iæk	H	jʌk
2145	疲	止	支	並	<i>kaikou</i>	3B	<i>ping</i>	b ^y iɛ	b ^y ie	p ^h i	L	p ^h i
2146	憊	蟹	皆	並	<i>kaikou</i>	2	<i>qu</i>	b ^y ei	b ^y ei	p <i>i</i>	R	p <i>i</i>
2147	憊	效	宵	從	<i>kaikou</i>	3	<i>ping</i>	dziɛu	dzieu	ts ^h io	L	tɕ ^h o
2148	悴	止	脂	從	<i>hekou</i>	3	<i>qu</i>	dz ^w i	dz ^w i	ts ^h iuiəi	H	tɕ ^h ue
2149	羸	止	支	來	<i>hekou</i>	3	<i>ping</i>	l ^w iɛ	l ^w ie	li	L	li
2150	瘦	流	尤	生	<i>kaikou</i>	3	<i>qu</i>	ɕiu	ɕəu	su	H	su
2151	癰	遇	虞	群	<i>hekou</i>	3	<i>ping</i>	giɤʊ	giɤʊ	ku	L	ku
2152	瘡	梗	昔	從	<i>kaikou</i>	3	<i>ru</i>	dziɛk	dziek	ts ^h iæk	H	tɕ ^h ʌk
2153	癰	山	仙	心	<i>kaikou</i>	3	<i>shang</i>	siɛn	sien	siən	R	sʌn
2154	癰	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	tɕʌn
2155	疥	蟹	皆	見	<i>kaikou</i>	2	<i>qu</i>	k ^y ei	k ^y ei	kai	L	kæ
2156	癰	蟹	泰	來	<i>kaikou</i>	1	<i>qu</i>	lai	lai	loi	R	lø
2157	疱	效	肴	滂	<i>kaikou</i>	2	<i>qu</i>	p ^h yæu	p ^h yau	p ^h o	L	p ^h o
2158	痘	流	侯	定	<i>kaikou</i>	1	<i>qu</i>	du	du	tu	H	tu
2159	癰	果	戈	來	<i>hekou</i>	1	<i>shang</i>	l ^w a	l ^w a	la	L	la
2160	癰	梗	錫	來	<i>kaikou</i>	4	<i>ru</i>	lek	lek	liæk	H	ljʌk

2161	蛊	遇	模	見	hekou	1	shang	kɿo	kɿo	ko ³⁸¹	H	ko
2162	脹	宕	陽	知	kaikou	3	qu	tian	tian	t ^h ian	R	te ^h an
2163	疔	梗	青	端	kaikou	4	ping	teŋ	teŋ	tiəŋ	L	teʌŋ
2164	疸	山	寒	端	kaikou	1	qu	tan	tan	tan	R	tan
2165	哮	效	肴	曉	kaikou	2	qu	h ^y æu	h ^y au	hio	R	hjo
2166	喘	山	仙	昌	hekou	3	shang	te ^h wiɛn	te ^h wien	ts ^h iən	R	te ^h ʌn
2167	咳	蟹	哈	溪	kaikou	1	shang	k ^h əi	k ^h əi	hʌi	R	hæ
2168	嗽	流	侯	心	kaikou	1	qu	su	su	su	R	su
2169	癰	臻	殷	影	kaikou	3	shang	ʔin	ʔiən	in	H	uən
2170	癰	臻	真	章	kaikou	3	shang	tein	tein	tin	H	tein
2171	癰	山	屑	精	kaikou	4	ru	tset	tset	tsiəl	H	teʌl
2172	癰	止	微	非	kaikou	3	qu	pɿi	pəi	pil	H	pi
2173	疣	流	尤	云	kaikou	3	ping	fiu	fiəu	u	L	u
2174	贅	蟹	祭	章	hekou	3	qu	te ^w iɛi	te ^w iɛi	ts ^h iuiəi	R	te ^h ue
2175	癰	梗	清	影	hekou	3A	shang	ʔiɛŋ	ʔiɛŋ	iəŋ	R	jʌŋ
2176	瘤	流	尤	來	kaikou	3	qu	liu	ləu	liu	R	lju
2177	跖	果	歌	定	kaikou	1	ping	da	da	t ^h a	L	t ^h a
2178	癰	果	戈	群	hekou	3	ping	g ^w ia	g ^w ia	ka	L	ka

³⁸¹The meaning for this reading is "cadelle". It is [ko] (R tone) when the meaning is "parasite".

2179	瘡	深	侵	影	<i>kaikou</i>	3B	<i>ping</i>	ʔ ^v im	ʔ ^v im	am	L	am
2180	瘡	假	麻	影	<i>kaikou</i>	2	<i>shang</i>	ʔ ^v æ	ʔ ^v a	a	R	a
2181	瘡	蟹	灰	定	<i>hekou</i>	1	<i>ping</i>	d ^{woi}	d ^{woi}	t ^h oi	L	t ^h ø
2182	疝	山	山	生	<i>kaikou</i>	2	<i>ping</i>	ʂ ^v en	ʂ ^v en	san	L	san
2183	瘻	流	侯	來	<i>kaikou</i>	1	<i>qu</i>	lu	lu	lu	R	lu
2184	痔	止	之	澄	<i>kaikou</i>	3	<i>shang</i>	d̪i	d̪iə	t ^h i	R	tɛ ^h i
2185	癰	山	山	匣	<i>kaikou</i>	2	<i>ping</i>	f ^v en	f ^v en	kan	R	kan
2186	瘞	止	脂	昌	<i>kaikou</i>	3	<i>qu</i>	tɛ ^h i	tɛ ^h i	ts ^h i	H	tɛ ^h i
2187	狂	宕	陽	群	<i>hekou</i>	3	<i>ping</i>	g ^w iaŋ	g ^w iaŋ	koaŋ	L	kwaŋ
2188	癩	山	先	端	<i>kaikou</i>	4	<i>ping</i>	ten	ten	tiən	L	tɛʌn
2189	瘞	山	薛	心	<i>kaikou</i>	3	<i>ru</i>	siet	siet	siəl	H	sʌl
2190	痢	止	脂	來	<i>kaikou</i>	3	<i>qu</i>	li	li	li	R	li
2191	痔	梗	青	定	<i>kaikou</i>	4	<i>ping</i>	deŋ	deŋ	tiəŋ	L	tɛʌŋ
2192	瘰	蟹	齊	端	<i>kaikou</i>	4	<i>shang</i>	tei	tei	tiəi	R	tɛe
2193	癰	通	鍾	影	<i>hekou</i>	3	<i>ping</i>	ʔiɰoŋ	ʔiɰoŋ	oŋ	R	oŋ
2194	疽	遇	魚	清	<i>hekou</i>	3	<i>ping</i>	ts ^h iɿ	ts ^h io	tsiə	L	tɛʌ
2195	瘡	宕	陽	初	<i>kaikou</i>	3	<i>ping</i>	ts ^h iaŋ	ts ^h iaŋ	ts ^h aŋ	L	tɛ ^h aŋ
2196	趺	山	先	見	<i>kaikou</i>	4	<i>shang</i>	ken	ken	kiən	R	kjʌn
2197	瘰	蟹	皆	見	<i>kaikou</i>	2	<i>ping</i>	k ^v ei	k ^v ei	hʌi	L	hæ
2198	瘡	宕	藥	疑	<i>kaikou</i>	3	<i>ru</i>	ŋiak	ŋiak	hak	H	hak

2199	店	咸	鹽	書	<i>kaikou</i>	3	<i>ping</i>	ɕiem	ɕiem	tsiəm	L	tɕɿm
2200	瘡	宕	鐸	曉	<i>hekou</i>	1	<i>ru</i>	h ^w ak	h ^w ak	hoak	H	hwak
2201	瘟	臻	魂	影	<i>hekou</i>	1	<i>ping</i>	ʔuon	ʔuon	on	L	on
2202	疫	梗	昔	以	<i>hekou</i>	3	<i>ru</i>	j ^w iek	j ^w iek	iək	H	jɿk
2203	痰	咸	談	定	<i>kaikou</i>	1	<i>ping</i>	dam	dam	tam	L	tam
2204	癩	山	月	見	<i>hekou</i>	3	<i>ru</i>	k ^w iɿt	k ^w iot	kuəl	H	kwɿl
2205	廩	咸	鹽	影	<i>kaikou</i>	3A	<i>shang</i>	ʔiem	ʔiem	iəm	R	jɿm
2206	痣	止	之	章	<i>kaikou</i>	3	<i>qu</i>	tɕi	tɕə	tsi	H	tɕi
2207	輓	臻	文	見	<i>hekou</i>	3	<i>ping</i>	kiun	kiun	kun	L	kun
2208	瘞	江	覺	知	<i>kaikou</i>	2	<i>ru</i>	t ^ʷ ɔk	t ^ʷ ok	t ^h ak	H	t ^h ak
2209	腫	通	鍾	章	<i>hekou</i>	3	<i>shang</i>	tɕiɿuŋ	tɕiɿuŋ	tsioŋ	R	tɕoŋ
2210	脰	臻	殷	曉	<i>kaikou</i>	3	<i>qu</i>	hin	hiən	hin	R	huən
2211	痂	假	麻	見	<i>kaikou</i>	2	<i>ping</i>	k ^ʷ æ	k ^ʷ a	ka	L	ka
2212	瘡	假	麻	莊	<i>kaikou</i>	2	<i>ping</i>	tɕ ^ʷ æ	tɕ ^ʷ a	ts ^h a	L	tɕ ^h a
2213	癩	山	桓	並	<i>hekou</i>	1	<i>ping</i>	b ^w an	b ^w an	pan	L	pan
2214	痕	臻	痕	匣	<i>kaikou</i>	1	<i>ping</i>	fən	fən	hin	L	huən
2215	疤	假	麻	幫	<i>kaikou</i>	2	<i>ping</i>	p ^ʷ æ	p ^ʷ a	p ^h a	L	p ^h a
2216	疵	止	支	從	<i>kaikou</i>	3	<i>ping</i>	dziE	dzie	tsɿ	L	tɕa
2217	崩	曾	登	幫	<i>kaikou</i>	1	<i>ping</i>	pəŋ	pəŋ	piŋ	L	puŋ
2218	薨	曾	登	曉	<i>hekou</i>	1	<i>ping</i>	h ^w əŋ	h ^w əŋ	huŋ	L	huŋ

2219	碎	臻	没	精	hekou	1	ru	ts ^h uot	ts ^h uot	tsol	H	teol
2220	死	止	脂	心	kaikou	3	shang	si	si	sΛ	R	sa
2221	魂	臻	魂	匣	hekou	1	ping	fiuon	fiuon	hon	L	hon
2222	魄	梗	陌	滂	kaikou	2	ru	p ^h æk	p ^h ak	pΛik	H	pæk
2223	靈	梗	青	來	kaikou	4	ping	leŋ	leŋ	liəŋ	L	ljΛŋ
2224	輻	止	之	日	kaikou	3	ping	ŋi	ŋə	zi	L	i
2225	櫬	臻	臻	初	kaikou	3	qu	tɕ ^h in	tɕ ^h in	ts ^h in	R	te ^h in
2226	棺	山	桓	見	hekou	1	ping	k ^w an	k ^w an	koan	L	kwan
2227	柩	流	尤	群	kaikou	3	qu	giu	gəu	ku	R	ku
2228	槨	宕	鐸	見	hekou	1	ru	k ^w ak	k ^w ak	koak	H	kwak
2229	殮	咸	鹽	來	kaikou	3	qu	liem	liem	liəm	R	ljΛm
2230	屍	止	脂	書	kaikou	3	ping	ei	ei	si	L	si
2231	殯	臻	真	幫	kaikou	3A	qu	pin	pin	pin	R	pin
2232	葬	宕	唐	精	kaikou	1	qu	tsaŋ	tsaŋ	tsaŋ	R	teaŋ
2233	窆	臻	諄	知	hekou	3	ping	t ^w in	t ^w in	tun	L	tun
2234	𣦵	梗	昔	邪	kaikou	3	ru	ziək	ziek	siək	H	sək
2235	碑	止	支	幫	kaikou	3B	ping	p ^y ie	p ^y ie	pi	L	pi
2236	碣	山	月	群	kaikou	3	ru	giɽt	giot	kal	H	kal
2237	墳	臻	文	奉	hekou	3	ping	biun	biun	pun	L	pun
2238	塚	通	鍾	知	hekou	3	shang	tɿuon	tɿuon	t ^h ion	H	te ^h on

2239	墓	遇	模	明	<i>hekou</i>	1	<i>qu</i>	m̥ʊo	m̥ʊo	mio	R	mjo
2240	壙	宕	唐	溪	<i>hekou</i>	1	<i>qu</i>	k ^{hw} aŋ	k ^{hw} aŋ	koaŋ	L	kwaŋ
2241	混	臻	魂	匣	<i>hekou</i>	1	<i>shang</i>	ɦʊon	ɦʊon	hon	R	hon
2242	沌	臻	魂	定	<i>hekou</i>	1	<i>shang</i>	ɖʊon	ɖʊon	ton	R	ton
2243	開	蟹	哈	溪	<i>kaikou</i>	1	<i>ping</i>	k ^h əi	k ^h əi	kʌi	L	kæ
2244	闕	梗	昔	並	<i>kaikou</i>	3A	<i>ru</i>	biɛk	biek	piək	H	pjʌk
2245	清	梗	清	清	<i>kaikou</i>	3	<i>ping</i>	tʂ ^h iɛŋ	tʂ ^h iɛŋ	tʂ ^h iəŋ	L	tɕ ^h ʌŋ
2246	濁	江	覺	澄	<i>kaikou</i>	2	<i>ru</i>	ɖ ^ʷ ɔk	ɖ ^ʷ ok	t ^h ak	H	t ^h ak
2247	位	止	脂	云	<i>hekou</i>	3	<i>qu</i>	ɦ ^w i	ɦ ^w i	ui	H	y
2248	奠	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	tɕʌn
2249	造	效	豪	從	<i>kaikou</i>	1	<i>shang</i>	dzau	dzau	tso	R	tɕo
2250	化	假	麻	曉	<i>hekou</i>	2	<i>qu</i>	h ^w æ	h ^w a	hoa	R	hwa
2251	幹	山	末	影	<i>hekou</i>	1	<i>ru</i>	ʔ ^w an	ʔ ^w an	al	H	al
2252	旋	山	仙	邪	<i>hekou</i>	3	<i>qu</i>	z ^w iɛn	z ^w iɛn	siən	R	sʌn
2253	光	宕	唐	見	<i>hekou</i>	1	<i>ping</i>	k ^w aŋ	k ^w aŋ	koaŋ	L	kwaŋ
2254	景	梗	庚	見	<i>kaikou</i>	3	<i>shang</i>	kiæŋ	kiaŋ	kiəŋ	H	kjʌŋ
2255	流	流	尤	來	<i>kaikou</i>	3	<i>ping</i>	liu	ləu	liu	L	lju
2256	轉	山	仙	知	<i>hekou</i>	3	<i>shang</i>	tʃ ^w iɛn	tʃ ^w iɛn	tiən	R	tɕʌn
2257	旻	臻	真	明	<i>kaikou</i>	3B	<i>ping</i>	m ^ʷ in	m ^ʷ in	min	L	min
2258	昊	效	豪	匣	<i>kaikou</i>	1	<i>shang</i>	ɦau	ɦau	ho	R	ho

2259	穹	通	東	溪	hekou	3	ping	k ^h iun	k ^h iun	kun	L	kun
2260	窿	通	東	來	hekou	3	ping	liun	liun	liun	L	ljun
2261	噉	臻	魂	透	hekou	1	ping	t ^h un	t ^h un	ton	L	ton
2262	旭	通	燭	曉	hekou	3	ru	hiuok	hiuok	uk	H	uk
2263	暈	臻	文	云	hekou	3	qu	fiun	fiun	un	H	un
2264	明	梗	庚	明	kaikou	3	ping	miæŋ	mian	miæŋ	L	mjaŋ
2265	照	效	宵	章	kaikou	3	qu	teiɐu	teieu	tsio	L	tɕo
2266	曜	效	宵	以	kaikou	3	qu	jiɐu	jieu	io	H	jo
2267	暉	止	微	曉	hekou	3	ping	hi	həi	hui	L	hy
2268	映	梗	庚	影	kaikou	3	qu	ʔiæŋ	ʔian	iæŋ	R	jaŋ
2269	瞞	臻	魂	明	hekou	1	shang	mɥon	mɥon	man	R	mun
2270	昧	蟹	灰	明	kaikou	1	qu	moi	moi	mai	R	mæ
2271	暗	咸	覃	影	kaikou	1	qu	ʔəm	ʔəm	am	R	am
2272	暝	梗	青	明	kaikou	4	ping	meŋ	meŋ	miæŋ	L	mjaŋ
2273	暄	山	元	曉	hekou	3	ping	h ^w iɛn	h ^w ion	huən	L	hwɛn
2274	暖	山	桓	泥	hekou	1	shang	n ^w an	n ^w an	nan	R	nan
2275	炎	咸	鹽	云	kaikou	3	ping	fiɛm	fiem	iəm	L	jaɪm
2276	燠	通	屋	影	hekou	3	ru	ʔiuk	ʔiuk	uk	H	uk
2277	涼	宕	陽	來	kaikou	3	ping	lian	lian	lian	L	ljaŋ
2278	冷	梗	庚	來	kaikou	2	shang	l ^ʷ æŋ	l ^ʷ aŋ	laŋ	H	læŋ

2279	凍	通	東	端	<i>hekou</i>	1	<i>qu</i>	<i>tun̩</i>	<i>tun̩</i>	<i>ton̩</i>	R	<i>ton̩</i>
2280	泮	山	桓	滂	<i>hekou</i>	1	<i>qu</i>	<i>p^hwan</i>	<i>p^hwan</i>	<i>pan</i>	R	<i>pan</i>
2281	晴	梗	清	從	<i>kaikou</i>	3	<i>ping</i>	<i>dziɛŋ</i>	<i>dzieŋ</i>	<i>ts^hiəŋ</i>	L	<i>tɕ^hɿŋ</i>
2282	霽	蟹	齊	精	<i>kaikou</i>	4	<i>qu</i>	<i>tsei</i>	<i>tsei</i>	<i>tsiəi</i>	R	<i>tɕe</i>
2283	霏	蟹	皆	明	<i>kaikou</i>	2	<i>ping</i>	<i>m^yei</i>	<i>m^yei</i>	<i>mɿi</i>	L	<i>mæ</i>
2284	暄	蟹	齊	影	<i>kaikou</i>	4	<i>qu</i>	<i>ʔei</i>	<i>ʔei</i>	<i>iəi</i>	R	<i>je</i>
2285	昕	臻	殷	曉	<i>kaikou</i>	3	<i>ping</i>	<i>hin</i>	<i>hiən</i>	<i>hin</i>	L	<i>hun</i>
2286	晡	遇	模	幫	<i>hekou</i>	1	<i>ping</i>	<i>pɸo</i>	<i>pɸo</i>	<i>p^ho</i>	L	<i>p^ho</i>
2287	晡	曾	職	莊	<i>kaikou</i>	3	<i>ru</i>	<i>tɕik</i>	<i>tɕiək</i>	<i>ts^hɿik</i>	H	<i>tɕ^hæk</i>
2288	盱	山	寒	見	<i>kaikou</i>	1	<i>qu</i>	<i>kan</i>	<i>kan</i>	<i>han</i>	H	<i>han</i>
2289	古	遇	模	見	<i>hekou</i>	1	<i>shang</i>	<i>kɸo</i>	<i>kɸo</i>	<i>ko</i>	R	<i>ko</i>
2290	今	深	侵	見	<i>kaikou</i>	3B	<i>ping</i>	<i>k^yim</i>	<i>k^yim</i>	<i>kim</i>	L	<i>kum</i>
2291	翌	曾	職	以	<i>kaikou</i>	3	<i>ru</i>	<i>jik</i>	<i>jiək</i>	<i>ik</i>	H	<i>ik</i>
2292	昨	宕	鐸	從	<i>kaikou</i>	1	<i>ru</i>	<i>dzak</i>	<i>dzak</i>	<i>tsak</i>	H	<i>tsak</i>
2293	夙	通	屋	心	<i>hekou</i>	3	<i>ru</i>	<i>siuk</i>	<i>siuk</i>	<i>siuk</i>	H	<i>suk</i>
2294	晏	山	刪	影	<i>kaikou</i>	2	<i>qu</i>	<i>ʔ^yæn</i>	<i>ʔ^yan</i>	<i>an</i>	R	<i>an</i>
2295	曩	宕	唐	泥	<i>kaikou</i>	1	<i>shang</i>	<i>naŋ</i>	<i>naŋ</i>	<i>naŋ</i>	R	<i>naŋ</i>
2296	昔	梗	昔	心	<i>kaikou</i>	3	<i>ru</i>	<i>siek</i>	<i>siek</i>	<i>siək</i>	H	<i>sək</i>
2297	人	臻	真	日	<i>kaikou</i>	3	<i>ping</i>	<i>ŋin</i>	<i>ŋin</i>	<i>zin</i>	L	<i>in</i>
2298	物	臻	物	微	<i>hekou</i>	3	<i>ru</i>	<i>miun</i>	<i>miun</i>	<i>mil</i>	H	<i>mul</i>

2299	受	流	尤	禪	<i>kaikou</i>	3	<i>shang</i>	dziu	dzəu	siu	H	su
2300	賦	遇	虞	非	<i>hekou</i>	3	<i>qu</i>	piɿɔ	piɿo	pu	H	pu
2301	品	深	侵	滂	<i>kaikou</i>	3B	<i>shang</i>	p ^h im	p ^h im	p ^h um	R	p ^h um
2302	彙	止	微	云	<i>hekou</i>	3	<i>qu</i>	ɸ ^w ii	ɸ ^w iəi	hui	H	hy
2303	滋	止	之	精	<i>kaikou</i>	3	<i>ping</i>	tsi	tsə	tsʌ	L	tea
2304	殖	曾	職	禪	<i>kaikou</i>	3	<i>ru</i>	dzik	dziək	sik	H	sik
2305	羽	遇	虞	云	<i>hekou</i>	3	<i>shang</i>	ɸiɿɔ	ɸiɿo	u	H	u
2306	毛	效	豪	明	<i>kaikou</i>	1	<i>ping</i>	mau	mau	mo	L	mo
2307	鱗	臻	真	來	<i>kaikou</i>	3	<i>ping</i>	lin	lin	lin	L	lin
2308	介	蟹	皆	見	<i>kaikou</i>	2	<i>qu</i>	k ^ʷ ei	k ^ʷ ei	kai	R	kæ
2309	飛	止	微	非	<i>kaikou</i>	3	<i>ping</i>	pɿi	pəi	pi	L	pi
2310	潛	咸	鹽	從	<i>kaikou</i>	3	<i>ping</i>	dziem	dziem	tsʌm	L	team
2311	動	通	東	定	<i>hekou</i>	1	<i>shang</i>	duŋ	duŋ	toŋ	R	toŋ
2312	植	曾	職	禪	<i>kaikou</i>	3	<i>ru</i>	dzik	dziək	sik	H	sik
2313	蜚	臻	魂	見	<i>hekou</i>	1	<i>ping</i>	kɿon	kɿon	kon	L	kon
2314	蟲	通	東	澄	<i>hekou</i>	3	<i>ping</i>	ɕiun	ɕiun	t ^h iun	L	te ^h un
2315	禽	深	侵	群	<i>kaikou</i>	3B	<i>ping</i>	g ^ʷ im	g ^ʷ im	kim	L	kum
2316	鳥	效	蕭	端	<i>kaikou</i>	4	<i>shang</i>	teu	teu	tio	H	tɕo
2317	魚	遇	魚	疑	<i>hekou</i>	3	<i>ping</i>	ŋiɿ	ŋio	ə	L	ʌ
2318	獸	流	尤	書	<i>kaikou</i>	3	<i>qu</i>	ɕiu	ɕəu	siu	H	su

2319	禾	果	戈	匣	hekou	1	ping	fi ^w a	fi ^w a	hoa	L	hwa
2320	穀	通	屋	見	hekou	1	ru	kuk	kuk	kok	H	kok
2321	菓	果	戈	見	hekou	1	shang	k ^w a	k ^w a	koa	R	kwa
2322	蔴	果	戈	來	hekou	1	shang	l ^w a	l ^w a	la	R	la
2323	菜	蟹	哈	清	kaikou	1	shang	ts ^h ai	ts ^h ai	ts ^h ai	R	te ^h æ
2324	蔬	遇	魚	生	hekou	3	ping	ʃiɿ	ʃio	so	L	so
2325	草	效	豪	清	kaikou	1	shang	ts ^h au	ts ^h au	ts ^h o	H	te ^h o
2326	卉	止	微	曉	hekou	3	shang	hi	hai	huai	R	hwe
2327	樹	遇	虞	禪	hekou	3	qu	dziɿo	dziɿo	siu	H	su
2328	木	通	屋	明	hekou	1	ru	muk	muk	mok	H	mok
2329	根	臻	痕	見	kaikou	1	ping	kən	kən	kin	L	kun
2330	菱	蟹	哈	見	kaikou	1	ping	kai	kai	hai	L	hæ
2331	株	遇	虞	知	hekou	3	ping	tiɿo	tiɿo	tiu	L	teu
2332	幹	山	寒	見	kaikou	1	qu	kan	kan	kan	R	kan
2333	槎	假	麻	崇	kaikou	2	ping	dʒ ^ʷ æ	dʒ ^ʷ a	sa	L	sa
2334	枿	山	曷	疑	kaikou	1	ru	ŋan	ŋan	al	L	al
2335	萌	梗	耕	明	kaikou	2	ping	m ^ʷ ɛŋ	m ^ʷ ɛŋ	mɿŋ	L	mæŋ
2336	芽	假	麻	疑	kaikou	2	ping	ŋ ^ʷ æ	ŋ ^ʷ a	a	L	a
2337	條	效	蕭	定	kaikou	4	ping	deu	deu	tio	L	teo
2338	柯	果	歌	見	kaikou	1	ping	ka	ka	ka	L	ka

2339	枝	止	支	章	<i>kaikou</i>	3	<i>ping</i>	teiɛ	teiɛ	tsi	L	tei
2340	葉	咸	葉	以	<i>kaikou</i>	3	<i>ru</i>	jiɛp	jiɛp	iəp	H	jaɲ
2341	花	假	麻	曉	<i>hekou</i>	2	<i>ping</i>	h ^w æ	h ^w a	hoa	L	hwa
2342	藁	止	支	日	<i>hekou</i>	3	<i>ping</i>	ŋ ^w iɛ	ŋ ^w ie	iəi	R	je
2343	英	梗	庚	影	<i>kaikou</i>	3	<i>ping</i>	ʔiæŋ	ʔiaŋ	iəŋ	L	jaŋ
2344	葩	假	麻	滂	<i>kaikou</i>	2	<i>ping</i>	p ^h æ	p ^h a	p ^h a	L	p ^h a
2345	叢	通	東	從	<i>hekou</i>	1	<i>ping</i>	dzun	dzun	ts ^h oŋ	L	te ^h oŋ
2346	苞	效	肴	幫	<i>kaikou</i>	2	<i>ping</i>	p ^y æu	p ^y au	p ^h o	L	p ^h o
2347	莖	梗	耕	匣	<i>kaikou</i>	2	<i>ping</i>	ɦ ^y ɛŋ	ɦ ^y eŋ	kɿŋ	L	kæŋ
2348	蒂	蟹	齊	端	<i>kaikou</i>	4	<i>qu</i>	tei	tei	t ^h iəi	H	te ^h e
2349	藤	曾	登	定	<i>kaikou</i>	1	<i>ping</i>	dəŋ	dəŋ	tiŋ	L	tuŋ
2350	藁	止	脂	來	<i>hekou</i>	3	<i>ping</i>	l ^w i	l ^w i	liu	L	lju
2351	秧	宕	陽	影	<i>kaikou</i>	3	<i>ping</i>	ʔiaŋ	ʔiaŋ	aŋ	L	aŋ
2352	苗	效	宵	明	<i>kaikou</i>	3B	<i>ping</i>	m ^y iɛu	m ^y ieu	mio	L	mjo
2353	榮	梗	庚	云	<i>hekou</i>	3	<i>ping</i>	ɦ ^w iæŋ	ɦ ^w iaŋ	iəŋ	L	jaŋ
2354	華	假	麻	匣	<i>hekou</i>	2	<i>ping</i>	ɦ ^w æ	ɦ ^w a	hoa	L	hwa
2355	枯	遇	模	溪	<i>hekou</i>	1	<i>ping</i>	k ^h ɤo	k ^h ɤo	ko	L	ko
2356	槁	效	豪	溪	<i>kaikou</i>	1	<i>shang</i>	k ^h au	k ^h au	ko	H	ko
2357	柴	蟹	佳	崇	<i>kaikou</i>	2	<i>ping</i>	dz ^y ɛ	dz ^y e	sii	L	si
2358	薪	臻	真	心	<i>kaikou</i>	3	<i>ping</i>	sin	sin	sin	L	sin

2359	芻	遇	虞	初	hekou	3	ping	tɕʰi̯u̯o	tɕʰi̯u̯o	tsʰu	L	tɕʰu
2360	蕘	效	宵	日	kaikou	3	ping	ɲieu	ɲieu	io	L	jo
2361	稈	山	寒	見	kaikou	1	shang	kan	kan	kan	R	kan
2362	楷	蟹	皆	見	kaikou	2	ping	kʷei	kʷei	kɿ	H	kæ
2363	穎	梗	清	以	hekou	3	shang	jʷieŋ	jʷieŋ	iəŋ	L	jɿŋ
2364	穗	止	脂	邪	hekou	3	qu	zʷi	zʷi	siu	L	su
2365	梗	梗	庚	見	kaikou	2	shang	kʷæŋ	kʷaŋ	kiəŋ	R	kjɿŋ
2366	荊	止	支	清	kaikou	3	qu	tsʰie	tsʰie	tsɿ	R	tɕa
2367	杈	假	麻	初	kaikou	2	ping	tɕʰʷæ	tɕʰʷa	tsʰa	L	tɕʰa
2368	梢	效	肴	生	kaikou	2	ping	ɕʷæu	ɕʷau	tsʰio	L	tɕʰo
2369	耕	梗	耕	見	kaikou	2	ping	kʷeŋ	kʷeŋ	kiəŋ	L	kjɿŋ
2370	稷	流	尤	影	kaikou	3	ping	ʔiu	ʔəu	u	L	u
2371	種	通	鍾	章	hekou	3	qu	tɕi̯u̯ŋ	tɕi̯u̯ŋ	tsioŋ	H	tɕoŋ
2372	蒔	止	之	禪	kaikou	3	ping	dzi	dziə	si	L	si
2373	耘	臻	文	云	hekou	3	ping	fiun	fiun	un	L	un
2374	籽	止	之	精	kaikou	3	ping	tsi	tsə	tsɿ	L	tɕa
2375	穰	效	宵	幫	kaikou	3B	ping	pʷieu	pʷieu	pʰio	L	pʰjo
2376	薈	效	豪	曉	kaikou	1	ping	hau	hau	ho	L	ho
2377	栽	蟹	哈	精	kaikou	1	ping	tsai	tsai	tsɿ	L	tɕæ
2378	接	咸	葉	精	kaikou	3	ru	tsʷiep	tsʷiep	tsiəp	H	tɕəp

2379	攪	山	先	清	<i>kaikou</i>	4	<i>ping</i>	ts ^h en	ts ^h en	ts ^h iən	L	te ^h ən
2380	插	咸	洽	初	<i>kaikou</i>	2	<i>ru</i>	tɕ ^h ɤp	tɕ ^h ɤp	sap	H	sap
2381	培	蟹	灰	並	<i>kaikou</i>	1	<i>ping</i>	boi	boi	pɿi	L	pæ
2382	壅	通	鍾	影	<i>hekou</i>	3	<i>qu</i>	ʔiɯŋ	ʔiɯŋ	oŋ	R	oŋ
2383	零	梗	青	來	<i>kaikou</i>	4	<i>ping</i>	leŋ	leŋ	liəŋ	L	ljəŋ
2384	落	宕	鐸	來	<i>kaikou</i>	1	<i>ru</i>	lak	lak	lak	H	lak
2385	隣	臻	真	來	<i>kaikou</i>	3	<i>qu</i>	lin	lin	lin	R	lin
2386	瓣	山	山	並	<i>kaikou</i>	2	<i>qu</i>	b ^ɥ en	b ^ɥ en	p ^h an	H	p ^h an
2387	甌	宕	唐	端	<i>kaikou</i>	1	<i>ping</i>	taŋ	taŋ	taŋ	L	taŋ
2388	瓢	宕	陽	日	<i>kaikou</i>	3	<i>ping</i>	ɲiaŋ	ɲiaŋ	iaŋ	L	jaŋ
2389	竿	山	寒	見	<i>kaikou</i>	1	<i>ping</i>	kan	kan	kan	L	kan
2390	簪	宕	藥	日	<i>kaikou</i>	3	<i>ru</i>	ɲiak	ɲiak	ziak	H	jak
2391	筠	臻	諄	云	<i>hekou</i>	3	<i>ping</i>	fi ^w in	fi ^w in	kiun	L	kjun
2392	籜	宕	鐸	透	<i>kaikou</i>	1	<i>ru</i>	t ^h ak	t ^h ak	t ^h ak	H	t ^h ak
2393	稼	假	麻	見	<i>kaikou</i>	2	<i>qu</i>	k ^ɥ æ	k ^ɥ a	ka	H	ka
2394	穉	曾	職	生	<i>kaikou</i>	3	<i>ru</i>	ɕik	ɕiək	sɿik	H	sæk
2395	穰	果	戈	來	<i>hekou</i>	1	<i>ping</i>	l ^w a	l ^w a	la	L	la
2396	穰	果	戈	定	<i>hekou</i>	1	<i>qu</i>	d ^w a	d ^w a	t ^h a	H	t ^h a
2397	收	流	尤	書	<i>kaikou</i>	3	<i>ping</i>	ɕiu	ɕəu	siu	L	su
2398	割	山	曷	見	<i>kaikou</i>	1	<i>ru</i>	kan	kan	hal	H	hal

2399	刈	蟹	廢	疑	<i>kaikou</i>	3	<i>qu</i>	ɲiai	ɲiai	ai	R	æ
2400	穫	宕	鐸	匣	<i>hekou</i>	1	<i>ru</i>	ɸʷak	ɸʷak	hoak	H	hwak
2401	擣	效	豪	端	<i>kaikou</i>	1	<i>shang</i>	tau	tau	to	R	to
2402	舂	通	鍾	書	<i>hekou</i>	3	<i>ping</i>	ɕiɯŋ	ɕiɯŋ	sioŋ	L	soŋ
2403	簸	果	戈	幫	<i>hekou</i>	1	<i>qu</i>	pʷa	pʷa	pʰa	R	pʰa
2404	哂	山	月	奉	<i>hekou</i>	3	<i>ru</i>	bʷɿɿt	bʷiot	pəl	H	pəl
2405	桴	遇	虞	敷	<i>hekou</i>	3	<i>ping</i>	pʰiɯɔ	pʰiɯɔ	pu	L	pu
2406	毗	止	脂	幫	<i>kaikou</i>	3A	<i>shang</i>	pi	pi	pʰi	R	pi
2407	糠	宕	唐	溪	<i>kaikou</i>	1	<i>ping</i>	kʰaŋ	kʰaŋ	kaŋ	L	kaŋ
2408	麤	臻	痕	匣	<i>kaikou</i>	1	<i>ru</i>	ɸət	ɸət	hɿl	H	hɯl
2409	苻	遇	虞	敷	<i>hekou</i>	3	<i>ping</i>	pʰiɯɔ	pʰiɯɔ	pu	L	pu
2410	莢	咸	帖	見	<i>kaikou</i>	4	<i>ru</i>	kep	kep	hiəp	H	hɿp
2411	柎	遇	虞	非	<i>hekou</i>	3	<i>ping</i>	piɯɔ	piɯɔ	pu	L	pu
2412	萼	宕	鐸	疑	<i>kaikou</i>	1	<i>ru</i>	ɲak	ɲak	ak	H	ak
2413	桴	臻	沒	見	<i>hekou</i>	1	<i>ru</i>	kɯt	kɯt	kol	H	kol
2414	柎	臻	沒	端	<i>hekou</i>	1	<i>ru</i>	tɯt	tɯt	tol	H	tol
2415	核	梗	麥	匣	<i>kaikou</i>	2	<i>ru</i>	ɸʷɛk	ɸʷɛk	hɿk	H	hæk
2416	櫛	臻	沒	匣	<i>hekou</i>	1	<i>ru</i>	ɸɯt	ɸɯt	kol	H	kol
2417	肫	臻	諄	章	<i>hekou</i>	3	<i>ping</i>	tɕʷɿn	tɕʷɿn	tun	L	tun
2418	臄	止	脂	並	<i>kaikou</i>	3A	<i>ping</i>	bi	bi	pi	L	pi

2419	距	遇	魚	群	<i>hekou</i>	3	<i>shang</i>	giɿ	gio	kə	R	kʌ
2420	尾	止	微	微	<i>kaikou</i>	3	<i>shang</i>	mii	məi	mi	R	mi
2421	嘴	止	支	精	<i>hekou</i>	3	<i>ping</i>	ts ^w iɛ	ts ^w ie	ts ^h iuiəi	R	tɕ ^h y
2422	喙	蟹	廢	曉	<i>hekou</i>	3	<i>qu</i>	h ^w iai	h ^w iai	huəi	R	hwe
2423	嗦	遇	模	心	<i>hekou</i>	1	<i>qu</i>	sɿo	sɿo	so	R	so
2424	吭	宕	唐	匣	<i>kaikou</i>	1	<i>ping</i>	ɦaŋ	ɦaŋ	haŋ	L	haŋ
2425	翰	山	寒	匣	<i>kaikou</i>	1	<i>qu</i>	ɦan	ɦan	han	R	han
2426	翮	梗	麥	匣	<i>kaikou</i>	2	<i>ru</i>	fi ^ʷ ɛk	fi ^ʷ ek	kiək	H	hæk
2427	翅	止	支	書	<i>kaikou</i>	3	<i>qu</i>	ɕiɛ	ɕie	si	R	si
2428	翼	曾	職	以	<i>kaikou</i>	3	<i>ru</i>	jiɿ	jiək	ik	H	ik
2429	翱	效	豪	疑	<i>kaikou</i>	1	<i>ping</i>	ŋau	ŋau	ko	L	ko
2430	翔	宕	陽	邪	<i>kaikou</i>	3	<i>ping</i>	ziaŋ	ziaŋ	siaŋ	L	saŋ
2431	翮	山	屑	匣	<i>kaikou</i>	4	<i>ru</i>	ɦet	ɦet	hil	H	hil
2432	翮	宕	唐	匣	<i>kaikou</i>	1	<i>ping</i>	ɦaŋ	ɦaŋ	haŋ	L	haŋ
2433	雌	止	支	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iɛ	ts ^h ie	tsʌ	L	tɕa
2434	雄	通	東	云	<i>hekou</i>	3	<i>ping</i>	ɦiuŋ	ɦiuŋ	uŋ	L	uŋ
2435	牝	臻	真	並	<i>kaikou</i>	3A	<i>shang</i>	bin	bin	piŋ	R	piŋ
2436	牡	流	侯	明	<i>kaikou</i>	1	<i>shang</i>	mu	mu	mo	R	mo
2437	峙	止	之	禪	<i>kaikou</i>	3	<i>ping</i>	dzi	dziə	si	L	si
2438	巢	效	肴	崇	<i>kaikou</i>	2	<i>ping</i>	dz ^ʷ æu	dz ^ʷ au	so	L	so

2439	窠	果	戈	溪	hekou	1	ping	k ^{hw} a	k ^{hw} a	koa	L	kwa
2440	棲	蟹	齊	心	kaikou	4	ping	sei	sei	siə	L	sɿ
2441	孳	止	之	精	kaikou	3	ping	tsi	tsə	tsɿ	L	tɕa
2442	菴	效	豪	並	kaikou	1	qu	bau	bau	p ^h o	R	p ^h o
2443	卵	山	桓	來	hekou	1	shang	l ^w an	l ^w an	lan	R	lan
2444	雛	遇	虞	崇	hekou	3	ping	dzɿʊo	dzɿʊo	ts ^h u	L	tɕ ^h u
2445	啄	江	覺	知	kaikou	2	ru	t ^ʷ ɔk	t ^ʷ ok	t ^h ak	H	t ^h ak
2446	哺	遇	模	並	hekou	1	qu	bɿo	bɿo	p ^h o	R	p ^h o
2447	鷺	流	侯	溪	kaikou	1	qu	k ^h u	k ^h u	ku	R	ku
2448	啼	蟹	齊	定	kaikou	4	ping	dei	dei	tiəi	L	tɕe
2449	驛	效	豪	清	kaikou	1	shang	ts ^h au	ts ^h au	ts ^h o	H	tɕ ^h o
2450	騾	果	戈	溪	hekou	1	qu	k ^{hw} a	k ^{hw} a	koa	R	kwa
2451	牯	遇	模	見	hekou	1	shang	kɿo	kɿo	ko	R	ko
2452	佇	止	之	從	kaikou	3	qu	dzi	dzə	tsɿ	H	tɕa
2453	犍	山	元	見	kaikou	3	ping	kiɿn	kion	kən	L	kɿn
2454	牯	蟹	皆	見	kaikou	2	qu	k ^ʷ ei	k ^ʷ ei	kiəi	R	kje
2455	驢	山	仙	書	kaikou	3	qu	ɕien	ɕien	siən	R	sɿn
2456	驢	臻	魂	端	hekou	1	ping	tɿon	tɿon	ton	L	ton
2457	肥	止	微	奉	kaikou	3	ping	bii	biəi	pi	L	pi
2458	臙	效	宵	幫	kaikou	3B	ping	p ^ʷ iɕu	p ^ʷ iɕu	p ^h io	L	p ^h jo

2459	癢	宕	唐	心	<i>kaikou</i>	1	<i>shang</i>	saŋ	saŋ	saŋ	R	saŋ
2460	踭	山	元	影	<i>hekou</i>	3	<i>shang</i>	ʔ ^w iɿn	ʔ ^w ion	oan	R	oan
2461	殺	遇	模	見	<i>hekou</i>	1	<i>shang</i>	kɿo	kɿo	ko	R	ko
2462	羝	蟹	齊	端	<i>kaikou</i>	4	<i>ping</i>	tei	tei	tiəi	L	tɛe
2463	羯	山	月	見	<i>kaikou</i>	3	<i>ru</i>	kiɿt	kiot	kal	H	kal
2464	獭	臻	文	奉	<i>hekou</i>	3	<i>ping</i>	biun	biun	pun	L	pun
2465	嘲	效	肴	知	<i>kaikou</i>	2	<i>ping</i>	t ^ʷ æu	t ^ʷ au	tio	L	tɛo
2466	噉	假	麻	以	<i>kaikou</i>	3	<i>qu</i>	jiæ	jia	ia	R	ja
2467	叻	梗	昔	邪	<i>kaikou</i>	3	<i>ru</i>	ziɛk	ziek	siək	R	sɿk
2468	鳴	梗	庚	明	<i>kaikou</i>	3	<i>ping</i>	miæŋ	mianŋ	miəŋ	L	mjɿŋ
2469	嘶	蟹	齊	心	<i>kaikou</i>	4	<i>ping</i>	sei	sei	sii	L	si
2470	吠	蟹	廢	奉	<i>hekou</i>	3	<i>qu</i>	b ^w iai	b ^w iai	p ^h iəi	R	p ^h je
2471	噪	效	豪	心	<i>kaikou</i>	1	<i>qu</i>	sau	sau	tso	R	tɛo
2472	雖	流	侯	見	<i>kaikou</i>	1	<i>qu</i>	ku	ku	ku	R	ku
2473	蠡	臻	諄	昌	<i>hekou</i>	3	<i>shang</i>	tɛ ^{hw} iɿn	tɛ ^{hw} iɿn	tsiun	R	tɛ ^h un
2474	蠕	山	仙	日	<i>hekou</i>	3	<i>shang</i>	ŋ ^w iɛn	ŋ ^w ien	ziən	R	jɿn
2475	翀	通	東	澄	<i>hekou</i>	3	<i>ping</i>	djiuŋ	djiuŋ	t ^h iuŋ	L	tɛ ^h uŋ
2476	翥	遇	魚	章	<i>hekou</i>	3	<i>qu</i>	tɛiɿ	tɛio	tsia	R	tɛa
2477	咆	效	肴	並	<i>kaikou</i>	2	<i>ping</i>	b ^ʷ æu	b ^ʷ au	p ^h o	L	p ^h o
2478	嗥	效	豪	匣	<i>kaikou</i>	1	<i>ping</i>	fiu	fiu	ho	L	ho

2479	叫	效	蕭	見	<i>kaikou</i>	4	<i>qu</i>	keu	keu	kio	R	kjo
2480	吼	流	侯	曉	<i>kaikou</i>	1	<i>shang</i>	hu	hu	hu	R	hu
2481	喱	咸	合	精	<i>kaikou</i>	1	<i>ping</i>	tsəp	tsəp	tsap	H	teap
2482	齧	山	屑	疑	<i>kaikou</i>	4	<i>ru</i>	ɲet	ɲet	hiəl	L	sɿl
2483	噬	蟹	祭	禪	<i>kaikou</i>	3	<i>qu</i>	dziɛi	dziei	siə	R	sɿ
2484	咬	效	肴	見	<i>kaikou</i>	2	<i>ping</i>	kʷæu	kʷau	kio	R	kjo
2485	舐	蟹	齊	端	<i>kaikou</i>	4	<i>shang</i>	tei	tei	tiəi	H	tee
2486	觸	通	燭	昌	<i>hekou</i>	3	<i>ru</i>	tɕʰiɯɔk	tɕʰiɯɔk	tsʰiok	H	tɕʰok
2487	踢	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tee
2488	攀	蟹	祭	云	<i>hekou</i>	3	<i>qu</i>	ɦʷiɛi	ɦʷiei	ui	H	y
2489	閑	山	山	匣	<i>kaikou</i>	2	<i>ping</i>	ɦʷɛn	ɦʷɛn	han	L	han
2490	圈	山	元	群	<i>hekou</i>	3	<i>shang</i>	gʷiɤn	gʷion	kuən	R	kwɿn
2491	苙	深	緝	來	<i>kaikou</i>	3	<i>ru</i>	lip	lip	lip	L	lip
2492	棧	山	山	崇	<i>kaikou</i>	2	<i>shang</i>	dzɿɛn	dzɿɛn	tsan	H	tean
2493	豢	山	刪	匣	<i>hekou</i>	2	<i>qu</i>	ɦʷɿæn	ɦʷɿan	hoan	R	hwan
2494	養	宕	陽	以	<i>kaikou</i>	3	<i>shang</i>	jianɻ	jianɻ	iaɻ	R	jaɻ
2495	飼	止	之	邪	<i>kaikou</i>	3	<i>qu</i>	zi	zə	sɿ	R	sa
2496	餵	止	支	影	<i>hekou</i>	3B	<i>qu</i>	ʔʷɿɛ	ʔʷɿɛ	ui	H	y
2497	騎	止	支	群	<i>kaikou</i>	3B	<i>ping</i>	gʷiɛ	gʷiɛ	kii	L	ki
2498	乘	曾	蒸	船	<i>kaikou</i>	3	<i>ping</i>	ziɻ	ziəɻ	siɻ	L	suɻ

2499	駕	假	麻	見	<i>kaikou</i>	2	<i>qu</i>	k ^ʷ æ	k ^ʷ a	ka	R	ka
2500	馭	遇	魚	疑	<i>hekou</i>	3	<i>qu</i>	ŋiɤ	ŋio	ə	R	ʌ
2501	騷	山	山	生	<i>kaikou</i>	2	<i>shang</i>	ʂ ^ʷ en	ʂ ^ʷ en	san	R	san
2502	駛	通	鍾	心	<i>hekou</i>	3	<i>shang</i>	siɤŋ	siɤŋ	soŋ	R	soŋ
2503	馳	止	支	澄	<i>kaikou</i>	3	<i>ping</i>	d̪iɛ	d̪iɛ	tʰiəi	L	tɕʰi
2504	驅	遇	虞	溪	<i>hekou</i>	3	<i>ping</i>	kʰiɤʔ	kʰiɤʔ	ku	L	ku
2505	蒐	流	尤	生	<i>kaikou</i>	3	<i>ping</i>	ʂiu	ʂəu	su	L	su
2506	狩	流	尤	書	<i>kaikou</i>	3	<i>qu</i>	ɕiu	ɕəu	siu	H	su
2507	獮	山	仙	心	<i>kaikou</i>	3	<i>shang</i>	siɛn	sien	siən	R	sʌn
2508	畋	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	tɕʌn
2509	捕	遇	模	並	<i>hekou</i>	1	<i>qu</i>	bɤʔ	bɤʔ	po	H	pʰo
2510	釣	效	蕭	端	<i>kaikou</i>	4	<i>qu</i>	teu	teu	tio	H	tɕo
2511	射	假	麻	船	<i>kaikou</i>	3	<i>qu</i>	ziæ	zia	sia	R	sa
2512	屠	遇	模	定	<i>hekou</i>	1	<i>ping</i>	dɤʔ	dɤʔ	to	L	to
2513	皮	止	支	並	<i>kaikou</i>	3B	<i>ping</i>	b ^ʷ iɛ	b ^ʷ iɛ	pʰi	L	pʰi
2514	革	梗	麥	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʷ ɛk	k ^ʷ ɛk	hiək	H	hɟʌk
2515	韋	止	微	云	<i>hekou</i>	3	<i>ping</i>	f ^ʷ i	f ^ʷ iəi	ui	L	y
2516	鞞	宕	鐸	溪	<i>hekou</i>	1	<i>ru</i>	kʰwʌk	kʰwʌk	koak	H	kwak
2517	筋	臻	殷	見	<i>kaikou</i>	3	<i>ping</i>	kin	kiən	kin	L	kuɛn
2518	角	江	覺	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʷ ɔk	k ^ʷ ɔk	kak	H	kak

2519	鬣	咸	葉	來	<i>kaikou</i>	3	<i>ru</i>	l ^y iep	l ^y iep	liəp	H	ljəp
2520	髮	通	東	精	<i>hekou</i>	1	<i>ping</i>	tsuŋ	tsuŋ	tsoŋ	L	tɕoŋ
2521	髻	止	脂	群	<i>kaikou</i>	3A	<i>ping</i>	gi	gi	ki	L	ki
2522	鰲	效	宵	並	<i>kaikou</i>	3A	<i>ping</i>	biɛu	bieu	p ^h io	L	p ^h jo
2523	蹄	蟹	齊	定	<i>kaikou</i>	4	<i>ping</i>	dei	dei	tiəi	L	tɕe
2524	蹄	梗	錫	端	<i>kaikou</i>	4	<i>ru</i>	tek	tek	tiək	H	tɕɛɤk
2525	蟠	山	桓	並	<i>hekou</i>	1	<i>ping</i>	b ^w an	b ^w an	pan	L	pan
2526	蟄	深	緝	澄	<i>kaikou</i>	3	<i>ru</i>	d̪ip	d̪ip	t ^h ip	H	tɕ ^h ip
2527	蛻	蟹	祭	書	<i>hekou</i>	3	<i>qu</i>	ɕ ^w iɛi	ɕ ^w iei	iəi	R	je
2528	蛭	通	東	溪	<i>hekou</i>	1	<i>ping</i>	k ^h uŋ	k ^h uŋ	koŋ	L	koŋ
2529	蚰	通	東	澄	<i>hekou</i>	3	<i>qu</i>	d̪iŋ	d̪iŋ	tiŋ	R	tɕuŋ
2530	蝕	曾	職	船	<i>kaikou</i>	3	<i>ru</i>	zɪk	ziək	sik	H	sik
2531	蕨	咸	嚴	曉	<i>kaikou</i>	3	<i>ping</i>	hiam	hiam	həm	R	hɤm
2532	螯	梗	昔	書	<i>kaikou</i>	3	<i>ru</i>	ɕiek	ɕiek	siək	H	sɤk
2533	驢	山	桓	清	<i>hekou</i>	1	<i>qu</i>	ts ^h wan	ts ^h wan	ts ^h an	R	tɕ ^h an
2534	驢	山	仙	知	<i>kaikou</i>	3	<i>qu</i>	t̪ien	t̪ien	tiən	R	tɕɛɤn
2535	騰	曾	登	定	<i>kaikou</i>	1	<i>ping</i>	dəŋ	dəŋ	tiŋ	L	tuŋ
2536	驤	宕	陽	心	<i>kaikou</i>	3	<i>ping</i>	siaŋ	siaŋ	iaŋ	L	jaŋ
2537	弔	效	宵	昌	<i>kaikou</i>	3	<i>ping</i>	tɕ ^h iɛu	tɕ ^h ieu	t ^h io	L	tɕ ^h o
2538	弛	止	支	書	<i>kaikou</i>	3	<i>shang</i>	ɕiɛ	ɕie	i	R	i

2539	驚	梗	庚	群	<i>kaikou</i>	3	<i>ping</i>	giæŋ	gian	kiæŋ	L	kjʌŋ
2540	檠	止	支	澄	<i>hekou</i>	3	<i>ping</i>	ɖ ^w ie	ɖ ^w ie	t ^h iu	H	tɕ ^h u
2541	穀	流	侯	見	<i>kaikou</i>	1	<i>qu</i>	ku	ku	ku	R	ku
2542	曠	宕	鐸	見	<i>hekou</i>	1	<i>ru</i>	k ^w ak	k ^w ak	koak	H	kwak
2543	彎	山	刪	影	<i>hekou</i>	2	<i>ping</i>	ʔ ^w æŋ	ʔ ^w an	man	L	man
2544	張	宕	陽	知	<i>kaikou</i>	3	<i>ping</i>	tʃian	tʃian	tian	L	tɕan
2545	祭	蟹	祭	精	<i>kaikou</i>	3	<i>qu</i>	tsiei	tsiei	tsiæi	R	tɕe
2546	祀	止	之	邪	<i>kaikou</i>	3	<i>shang</i>	zi	zə	sʌ	R	sa
2547	歆	深	侵	曉	<i>kaikou</i>	3B	<i>ping</i>	h ^y im	h ^y im	him	L	hum
	饗	宕	陽	曉	<i>kaikou</i>	3	<i>shang</i>	hian	hian	hian	R	hjaŋ
2549	福	通	屋	非	<i>hekou</i>	3	<i>ru</i>	piuk	piuk	pok	H	pok
2550	祿	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	nok	H	nok
2551	祐	流	尤	云	<i>kaikou</i>	3	<i>qu</i>	fiu	fiəu	u	H	u
2552	祚	遇	模	從	<i>hekou</i>	1	<i>qu</i>	dzɯo	dzɯo	tso	R	tɕo
2553	宴	山	先	影	<i>kaikou</i>	4	<i>qu</i>	ʔen	ʔen	iæn	R	jʌŋ
2554	餞	山	仙	從	<i>kaikou</i>	3	<i>shang</i>	dziɛŋ	dzien	tsiæn	R	tɕʌŋ
2555	犒	效	豪	溪	<i>kaikou</i>	1	<i>qu</i>	k ^h au	k ^h au	ko	R	ko
2556	勞	效	豪	來	<i>kaikou</i>	1	<i>qu</i>	lau	lau	ro	R	ro
2557	餽	臻	文	云	<i>hekou</i>	3	<i>qu</i>	fiun	fiun	un	R	un
2558	餉	宕	陽	書	<i>kaikou</i>	3	<i>qu</i>	ɕian	ɕian	hian	R	hjaŋ

2559	𩚑	咸	葉	云	<i>kaikou</i>	3B	<i>ru</i>	ɦʷiɛp	ɦʷiɛp	niəp	H	njʌp
2560	𩚑	遇	模	並	<i>hekou</i>	1	<i>qu</i>	bʊo	bʊo	pʰo	R	pʰo
2561	汲	深	緝	見	<i>kaikou</i>	3B	<i>ru</i>	kʷip	kʷip	kip	H	kuɸ
2562	注	遇	虞	章	<i>hekou</i>	3	<i>qu</i>	tɕiʊo	tɕiʊo	tsu	R	tɕu
2563	澡	效	豪	精	<i>kaikou</i>	1	<i>shang</i>	tsau	tsau	tso	R	tɕo
2564	洗	蟹	齊	心	<i>kaikou</i>	4	<i>shang</i>	sei	sei	siəi	R	se
2565	沐	通	屋	明	<i>hekou</i>	1	<i>ru</i>	muk	muk	mok	L	mok
2566	浴	通	燭	以	<i>hekou</i>	3	<i>ru</i>	jiʊok	jiʊok	iok	H	jok
2567	漱	流	侯	心	<i>kaikou</i>	1	<i>qu</i>	su	su	su	R	su
2568	盥	山	桓	見	<i>hekou</i>	1	<i>shang</i>	kʷan	kʷan	koan	R	kwan
2569	淘	效	豪	定	<i>kaikou</i>	1	<i>ping</i>	dau	dau	to	L	to
2570	浙	梗	錫	心	<i>kaikou</i>	4	<i>ru</i>	sek	sek	siək	H	sək
2571	沙	假	麻	生	<i>kaikou</i>	1	<i>qu</i>	ɕʷæ	ɕʷa	sa	L	sa
2572	汰	蟹	泰	透	<i>kaikou</i>	1	<i>qu</i>	tʰai	tʰai	tʰai	R	tʰæ
2573	泔	咸	談	見	<i>kaikou</i>	1	<i>ping</i>	kam	kam	kam	L	kam
2574	潘	山	桓	滂	<i>hekou</i>	1	<i>ping</i>	pʰwan	pʰwan	pən	L	pan
2575	瀋	深	侵	昌	<i>kaikou</i>	3	<i>shang</i>	tɕʰim	tɕʰim	sim	R	sim
2576	澣	山	山	見	<i>kaikou</i>	2	<i>shang</i>	kʷɛn	kʷɛn	kan	R	kan
2577	𩚑	梗	陌	莊	<i>kaikou</i>	2	<i>ru</i>	tɕʷæk	tɕʷak	tsʰaik	H	tɕʰæk
2578	壓	咸	狎	影	<i>kaikou</i>	2	<i>ru</i>	ʔʷæp	ʔʷap	ap	H	ap

2579	澄	曾	蒸	澄	<i>kaikou</i>	3	<i>ping</i>	ɕiŋ	ɕiəŋ	tiŋ	L	tuŋ
2580	瀘	遇	魚	來	<i>hekou</i>	3	<i>qu</i>	liɿ	lio	liə	R	ljʌ
2581	渣	假	麻	莊	<i>kaikou</i>	2	<i>ping</i>	tɕʰæ	tɕʰa	sa	L	sa
2582	滓	止	之	莊	<i>kaikou</i>	3	<i>shang</i>	tɕi	tɕə	tsʌi	R	tɕæ
2583	迕	臻	殷	疑	<i>kaikou</i>	3	<i>qu</i>	ŋin	ŋiən	in	H	uŋ
2584	澗	山	先	定	<i>kaikou</i>	4	<i>qu</i>	den	den	tiən	R	tɕʌn
2585	涌	通	鍾	以	<i>hekou</i>	3	<i>shang</i>	jiuŋ	jiuŋ	ioŋ	R	joŋ
2586	沸	止	微	非	<i>kaikou</i>	3	<i>qu</i>	pʰi	pəi	pi	R	pi
2587	滾	臻	魂	見	<i>hekou</i>	1	<i>shang</i>	kʉn	kʉn	kon	R	kon
2588	涓	山	桓	見	<i>hekou</i>	1	<i>ping</i>	kʷan	kʷan	koan	L	kwan
2589	添	咸	添	透	<i>kaikou</i>	4	<i>ping</i>	tʰem	tʰem	tʰiəm	H	tɕʰʌm
2590	沃	通	沃	影	<i>hekou</i>	1	<i>ru</i>	ʔuok	ʔuok	ok	H	ok
2591	溢	臻	質	以	<i>kaikou</i>	3	<i>ru</i>	jit	jit	il	H	il
2592	漣	山	仙	見	<i>kaikou</i>	3B	<i>shang</i>	kʰien	kʰien	kən	R	kʌn
2593	穀	蟹	哈	精	<i>kaikou</i>	1	<i>shang</i>	tsai	tsai	tsʌi	R	tɕæ
2594	殺	山	黠	生	<i>kaikou</i>	2	<i>ru</i>	ɕʰet	ɕʰet	sal	H	sal
2595	焜	蟹	灰	透	<i>hekou</i>	1	<i>ping</i>	tʰwoi	tʰwoi	tʰoi	R	tʰø
2596	燭	深	侵	邪	<i>kaikou</i>	3	<i>ping</i>	zim	zim	sim	L	sim
2597	撕	止	支	心	<i>kaikou</i>	3	<i>ping</i>	siɛ	sie	sʌ	L	sa
2598	攔	咸	鹽	以	<i>kaikou</i>	3	<i>shang</i>	jiem	jiem	ziəm	L	jʌm

2599	烝	曾	蒸	章	<i>kaikou</i>	3	<i>ping</i>	teṽ	teṽəŋ	tsṽ	L	teuŋ
2600	魚	流	尤	非	<i>kaikou</i>	3	<i>shang</i>	piu	pəu	pu	R	pu
2601	炊	止	支	昌	<i>hekou</i>	3	<i>ping</i>	te ^{hw} iɛ	te ^{hw} iɛ	ts ^{hi} ui	L	te ^h y
2602	爨	山	桓	清	<i>hekou</i>	1	<i>qu</i>	ts ^{hw} an	ts ^{hw} an	ts ^h an	H	te ^h an
2603	烹	梗	庚	滂	<i>kaikou</i>	2	<i>ping</i>	p ^h æŋ	p ^h æŋ	p ^h ʌŋ	L	p ^h æŋ
2604	煮	遇	魚	章	<i>hekou</i>	3	<i>shang</i>	teṽ	teṽio	tsia	R	tea
2605	飪	深	侵	日	<i>kaikou</i>	3	<i>shang</i>	ŋim	ŋim	zim	R	im
2606	熟	通	屋	禪	<i>hekou</i>	3	<i>ru</i>	dziuk	dziuk	siuk	H	suk
2607	饋	臻	文	非	<i>hekou</i>	3	<i>ping</i>	piun	piun	pun	L	pun
2608	餹	流	尤	來	<i>kaikou</i>	3	<i>qu</i>	liu	ləu	liu	R	lju
2609	攤	山	寒	透	<i>kaikou</i>	1	<i>ping</i>	t ^h an	t ^h an	t ^h an	L	t ^h an
2610	漈	山	寒	見	<i>kaikou</i>	1	<i>ping</i>	kan	kan	kan	L	kan
2611	搗	蟹	灰	來	<i>hekou</i>	1	<i>ping</i>	l ^w oi	l ^w oi	loi	L	lø
2612	研	山	先	疑	<i>kaikou</i>	4	<i>ping</i>	ŋen	ŋen	iən	L	jʌn
2613	齏	止	脂	精	<i>kaikou</i>	3	<i>ping</i>	tsi	tsi	tsʌi	L	teæ
2614	盛	梗	清	禪	<i>kaikou</i>	3	<i>ping</i>	dziɛŋ	dziɛŋ	siəŋ	L	sʌŋ
2615	釘	梗	青	端	<i>kaikou</i>	4	<i>qu</i>	teŋ	teŋ	tiəŋ	R	teʌŋ
2616	𧄸	流	侯	定	<i>kaikou</i>	1	<i>qu</i>	du	du	tu	H	tu
2617	醃	咸	鹽	影	<i>kaikou</i>	3B	<i>ping</i>	ʔ ^{vi} em	ʔ ^{vi} em	əm	L	ʌm
2618	𩚑	山	元	敷	<i>hekou</i>	3	<i>qu</i>	p ^{hw} iʌn	p ^{hw} iʌn	pən	L	pʌn

2619	徽	蟹	灰	明	<i>kaikou</i>	1	<i>qu</i>	moi	moi	mɿi	L	mæ
2620	浥	深	緝	影	<i>kaikou</i>	3B	<i>ru</i>	ʔ ^v ip	ʔ ^v ip	ip	H	uɪp
2621	鯨	蟹	祭	影	<i>kaikou</i>	3B	<i>qu</i>	ʔ ^v iɛi	ʔ ^v iei	əi	R	e
2622	浥	深	緝	影	<i>kaikou</i>	3B	<i>ru</i>	ʔ ^v ip	ʔ ^v ip	ip	H	uɪp
2622	錫	蟹	夬	影	<i>kaikou</i>	2	<i>qu</i>	ʔ ^v æi	ʔ ^v ai	ai	H	æ
2623	醜	通	屋	滂	<i>hekou</i>	1	<i>ru</i>	p ^h uk	p ^h uk	pok	H	pok
2624	殫	流	尤	非	<i>kaikou</i>	3	<i>shang</i>	pɿu	pəu	pu	R	pu
2626	焞	曾	職	並	<i>kaikou</i>	3	<i>ru</i>	bik	biək	p ^h ip	H	p ^h ip
2627	焙	蟹	灰	並	<i>kaikou</i>	1	<i>qu</i>	boi	boi	pɿi	L	pæ
2628	烘	通	東	匣	<i>hekou</i>	1	<i>ping</i>	ɦuŋ	ɦuŋ	hoŋ	L	hoŋ
2629	燔	山	元	奉	<i>hekou</i>	3	<i>ping</i>	b ^w iɤn	b ^w ion	pən	L	pɤn
2630	炙	假	麻	章	<i>kaikou</i>	3	<i>qu</i>	teiæ	teia	tsia	R	tea
2631	爍	咸	洽	崇	<i>kaikou</i>	2	<i>ru</i>	dz ^ʰ ɛp	dz ^ʰ ɛp	tsap	H	teap
2632	爍	宕	藥	以	<i>kaikou</i>	3	<i>ru</i>	jiak	jiak	iak	L	jak
2633	爍	咸	談	來	<i>kaikou</i>	1	<i>shang</i>	lam	lam	lam	R	lam
2634	焦	效	宵	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛu	tsieu	ts ^h io	L	te ^h o
2635	炮	效	肴	並	<i>kaikou</i>	2	<i>ping</i>	b ^ʷ æu	b ^ʷ au	p ^h o	L	p ^h o
2636	爍	效	豪	影	<i>kaikou</i>	1	<i>ping</i>	ʔau	ʔau	o	L	o
2637	煎	山	仙	精	<i>kaikou</i>	3	<i>ping</i>	tsiɛn	tsien	tsiɛn	L	teɤn
2638	熬	效	豪	疑	<i>kaikou</i>	1	<i>ping</i>	ŋau	ŋau	o	L	o

2639	炒	效	肴	初	<i>kaikou</i>	2	<i>shang</i>	tɕʰy̌æu	tɕʰy̌au	tsʰio	H	tɕʰo
2640	燻	宕	鐸	幫	<i>kaikou</i>	1	<i>ru</i>	pak	pak	pak	H	pak
2641	嘗	宕	陽	禪	<i>kaikou</i>	3	<i>ping</i>	dziaŋ	dziaŋ	siaŋ	L	saŋ
2642	嗜	止	脂	禪	<i>kaikou</i>	3	<i>qu</i>	dzi	dzi	ki	L	ki
2643	饑	咸	咸	崇	<i>kaikou</i>	2	<i>ping</i>	dzɿ̌ɛm	dzɿ̌ɛm	tsʰam	L	tɕʰam
2644	渴	山	曷	溪	<i>kaikou</i>	1	<i>ru</i>	kʰan	kʰan	kal	L	kal
2645	味	止	微	微	<i>kaikou</i>	3	<i>qu</i>	mii	məi	mi	R	mi
2646	臭	流	尤	昌	<i>kaikou</i>	3	<i>qu</i>	tɕʰiu	tɕʰəu	tsʰiui	R	tɕʰu
2647	香	宕	陽	曉	<i>kaikou</i>	3	<i>ping</i>	hiaŋ	hiaŋ	hiaŋ	L	hjaŋ
2648	馨	梗	青	曉	<i>kaikou</i>	4	<i>ping</i>	heŋ	heŋ	hiəŋ	L	hjʌŋ
2649	葷	臻	文	曉	<i>hekou</i>	3	<i>ping</i>	hiun	hiun	hun	L	hun
2650	醞	咸	嚴	疑	<i>kaikou</i>	3	<i>qu</i>	ɲiam	ɲiam	əɱ	R	ʌɱ
2651	醇	臻	諄	禪	<i>hekou</i>	3	<i>ping</i>	dzʷɪn	dzʷɪn	siun	L	sun
2652	醴	通	鍾	娘	<i>hekou</i>	3	<i>ping</i>	ɳi̯ʊŋ	ɳi̯ʊŋ	noŋ	L	noŋ
2653	腐	遇	虞	奉	<i>hekou</i>	3	<i>shang</i>	bi̯ʊ	bi̯ʊ	pu	R	pu
2654	臊	效	豪	心	<i>kaikou</i>	1	<i>ping</i>	sau	sau	tso	R	tɕo
2655	羶	山	仙	書	<i>kaikou</i>	3	<i>ping</i>	ɕien	ɕien	tsiən	L	tɕʌn
2656	鯉	梗	青	心	<i>kaikou</i>	4	<i>ping</i>	seŋ	seŋ	siəŋ	L	sʌŋ
2657	辛	臻	真	心	<i>kaikou</i>	3	<i>ping</i>	sin	sin	sin	L	sin
2658	辣	山	曷	來	<i>kaikou</i>	1	<i>ru</i>	lan	lan	lal	L	lal

2659	酸	山	桓	心	hekou	1	ping	s ^w an	s ^w an	san	L	san
2660	苦	遇	模	溪	hekou	1	shang	k ^h uo	k ^h uo	ko	L	ko
2661	甘	咸	談	見	kaikou	1	ping	kam	kam	kam	L	kam
2662	甜	咸	添	定	kaikou	4	ping	dem	dem	t ^h iəm	L	tɛ ^h ɐm
2663	鹹	咸	咸	匣	kaikou	2	ping	fi ^v em	fi ^v em	ham	L	ham
2664	淡	咸	談	定	kaikou	1	qu	dam	dam	tam	R	tam
2665	吞	臻	痕	透	kaikou	1	ping	t ^h ən	t ^h ən	t ^h ɐn	L	t ^h an
2666	含	咸	覃	匣	kaikou	1	ping	fiəm	fiəm	ham	L	ham
2667	噲	深	侵	群	kaikou	3B	ping	g ^v im	g ^v im	kim	L	kum
2668	嚙	山	先	影	kaikou	4	qu	ʔen	ʔen	iən	R	jɐn
2669	齧	臻	痕	溪	kaikou	1	shang	k ^h ən	k ^h ən	kin	L	kun
2670	齧	臻	痕	匣	kaikou	1	ru	fiət	fiət	hil	L	hul
2671	喫	梗	錫	溪	kaikou	4	ru	k ^h ek	k ^h ek	kik	H	k [*] ik
2672	噉	咸	談	定	kaikou	1	shang	dam	dam	tam	R	tam
2673	嘯	江	覺	生	kaikou	2	ru	ʂ ^v ɔk	ʂ ^v ok	sak	H	sak
2674	吮	山	仙	從	hekou	3	shang	dz ^w iɛn	dz ^w ien	iən	R	jɐn
2675	舐	止	支	船	kaikou	3	shang	ziɛ	zie	tiəi	R	tei
2676	舔	咸	添	透	kaikou	4	shang	t ^h em	t ^h em	t ^h iəm	R	tɛ ^h ɐm
2677	啜	山	薛	知	hekou	3	ru	ʈ ^w iɛt	ʈ ^w iet	t ^h iəl	H	tɛ ^h ɐl
2678	飲	咸	洽	生	kaikou	2	ru	ʂ ^v ɛp	ʂ ^v ep	sap	H	sap

2679	飲	深	侵	影	<i>kaikou</i>	3B	<i>shang</i>	ʔ ^v im	ʔ ^v im	im	H	um
2680	嚼	宕	藥	從	<i>kaikou</i>	3	<i>ru</i>	dziak	dziak	tsiak	H	teak
2681	醞	臻	文	影	<i>hekou</i>	3	<i>qu</i>	ʔiun	ʔiun	on	R	on
2682	釀	宕	陽	娘	<i>kaikou</i>	3	<i>qu</i>	ɲiaŋ	ɲiaŋ	iaŋ	R	jaŋ
2683	沛	蟹	齊	精	<i>kaikou</i>	4	<i>qu</i>	tsei	tsei	tsʌ	R	tea
2684	滫	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	lok	H	lok
2685	釃	止	支	生	<i>kaikou</i>	3	<i>ping</i>	ʂiɛ	ʂie	sii	L	sui
2686	醕	蟹	佳	生	<i>kaikou</i>	2	<i>qu</i>	ʂ ^v ɛ	ʂ ^v e	ts ^h ai	H	te ^h æ
2687	斟	深	侵	章	<i>kaikou</i>	3	<i>ping</i>	teim	teim	tsim	L	teim
2688	酌	宕	藥	章	<i>kaikou</i>	3	<i>ru</i>	teiak	teiak	tsiak	L	teak
2689	斟	遇	虞	見	<i>hekou</i>	3	<i>ping</i>	kiɤŋ	kiɤŋ	kiu	L	ku
2690	挹	深	緝	影	<i>kaikou</i>	3A	<i>ru</i>	ʔep	ʔep	ip	H	uip
2691	舀	效	宵	以	<i>kaikou</i>	3	<i>shang</i>	jiɛu	jieu	io	R	jo
2692	杼	遇	魚	船	<i>hekou</i>	3	<i>shang</i>	ziɤ	zio	siə	R	sʌ
2693	獻	山	元	曉	<i>kaikou</i>	3	<i>qu</i>	hiɤn	hion	hən	L	hʌn
2694	酬	流	尤	禪	<i>kaikou</i>	3	<i>ping</i>	dziu	dʒəu	siu	L	su
2695	交	效	肴	見	<i>kaikou</i>	2	<i>ping</i>	k ^v æu	k ^v au	kio	L	kjo
2696	錯	宕	鐸	清	<i>kaikou</i>	1	<i>ru</i>	ts ^h ak	ts ^h ak	ts ^h ak	H	te ^h ak
2697	樂	江	覺	疑	<i>kaikou</i>	2	<i>ru</i>	ŋ ^v ɔk	ŋ ^v ok	ak	H	ak
2698	曲	通	燭	溪	<i>hekou</i>	3	<i>ru</i>	k ^h iɤŋ	k ^h iɤŋ	kok	H	kok

2699	吹	止	支	昌	hekou	3	ping	tɕ ^{hw} iɛ	tɕ ^{hw} iɛ	ts ^h iu	L	tɕ ^h y
2700	唱	宕	陽	昌	kaikou	3	qu	tɕ ^h iaŋ	tɕ ^h iaŋ	ts ^h iaŋ	R	tɕ ^h aŋ
2701	歌	果	歌	見	kaikou	1	ping	ka	ka	ka	L	ka
2702	舞	遇	虞	微	hekou	3	shang	miɯo	miɯo	mu	R	mu
2703	醉	止	脂	精	hekou	3	qu	ts ^w i	ts ^w i	ts ^h iui	R	tɕ ^h y
2704	酗	遇	虞	曉	hekou	3	qu	hiɯo	hiɯo	hu	H	hu
2705	耍	假	麻	生	hekou	2	shang	ʂ ^w æ	ʂ ^w a	soa	R	swa
2706	戲	止	支	曉	kaikou	3B	qu	h ^y iɛ	h ^y iɛ	hii	R	hui
2707	閏	通	東	匣	hekou	1	qu	ɦuŋ	ɦuŋ	hoŋ	R	hoŋ
2708	鬧	效	肴	娘	kaikou	2	qu	ŋ ^y æu	ŋ ^y au	nio	R	njo
2709	罵	假	麻	明	kaikou	2	qu	m ^y æ	m ^y a	ma	R	ma
2710	詈	止	支	來	kaikou	3	qu	liɛ	lie	li	R	li
2711	戰	山	仙	章	kaikou	3	qu	tɕiɛn	tɕiɛn	tsiɛn	R	tɕɛn
2712	閩	流	侯	端	kaikou	1	qu	tu	tu	t ^h u	H	t ^h u
2713	鋸	臻	物	溪	hekou	3	ru	k ^h iun	k ^h iun	kul	H	kul
2714	鉞	臻	術	心	hekou	3	ru	s ^w it	s ^w it	siul	H	sul
2715	旂	流	尤	以	kaikou	3	ping	jiu	jəu	iu	L	iu
2716	旒	流	尤	來	kaikou	3	ping	liu	ləu	liu	L	lju
2717	鉞	宕	陽	微	kaikou	3	ping	miaŋ	miaŋ	maŋ	L	maŋ
2718	刃	臻	真	日	kaikou	3	qu	ŋin	ŋin	zin	R	in

2719	銑	梗	庚	生	<i>kaikou</i>	2	<i>ping</i>	ɕʰæŋ	ɕʰaŋ	sɿŋ	L	sæŋ
2720	銹	流	尤	心	<i>kaikou</i>	3	<i>qu</i>	siu	səu	siu	H	su
2721	型	梗	青	匣	<i>kaikou</i>	4	<i>ping</i>	fiŋ	fiŋ	hiəŋ	L	hjaŋ
2722	模	遇	模	明	<i>hekou</i>	1	<i>ping</i>	mɯo	mɯo	mo	L	mo
2723	鞣	蟹	皆	並	<i>kaikou</i>	2	<i>qu</i>	bʰei	bʰei	pʰai	R	pæ
2724	楨	蟹	齊	來	<i>kaikou</i>	4	<i>qu</i>	lei	lei	liəi	R	lje
2725	鐫	臻	魂	從	<i>hekou</i>	1	<i>qu</i>	dzuon	dzuon	tson	R	teon
2726	鎔	咸	合	透	<i>kaikou</i>	1	<i>ru</i>	tʰəp	tʰəp	tap	H	tap
2727	鈕	流	尤	娘	<i>kaikou</i>	3	<i>shang</i>	ŋiɯ	ŋəu	niu	R	nju
2728	釳	流	侯	溪	<i>kaikou</i>	1	<i>shang</i>	kʰu	kʰu	ku	R	ku
2729	焯	效	宵	心	<i>kaikou</i>	3	<i>ping</i>	sieu	sieu	sio	L	so
2730	烱	宕	陽	以	<i>kaikou</i>	3	<i>ping</i>	jian	jian	ian	L	jan
2731	焯	蟹	灰	清	<i>hekou</i>	1	<i>qu</i>	tʰwoi	tʰwoi	siu	H	su
2732	鎰	梗	庚	澄	<i>kaikou</i>	2	<i>qu</i>	dʰæŋ	dʰaŋ	tiəŋ	R	teŋ
2733	鎔	通	鍾	以	<i>hekou</i>	3	<i>ping</i>	jiuŋ	jiuŋ	ioŋ	L	joŋ
2734	冶	假	麻	以	<i>kaikou</i>	3	<i>shang</i>	jiæ	jia	ia	R	ja
2735	鍊	山	先	來	<i>kaikou</i>	4	<i>qu</i>	len	len	liən	R	ljaŋ
2736	鍛	山	桓	端	<i>hekou</i>	1	<i>qu</i>	tʰan	tʰan	tan	R	tan
2737	鍋	效	蕭	端	<i>kaikou</i>	4	<i>ping</i>	teu	teu	tio	L	teo
2738	鏤	流	侯	來	<i>kaikou</i>	1	<i>qu</i>	lu	lu	lu	L	lu

2739	鍍	遇	模	定	<i>hekou</i>	1	<i>qu</i>	d̥ʊo	d̥ʊo	to	R	to
2740	鋤	通	沃	影	<i>hekou</i>	1	<i>ru</i>	ʔʊok	ʔʊok	ok	H	ok
2741	鑄	遇	虞	章	<i>hekou</i>	3	<i>qu</i>	teiʊɔ	teiʊo	tsu	R	tɕu
2742	鑄	假	麻	心	<i>kaikou</i>	3	<i>shang</i>	iæ	ia	sia	H	sa
2743	錮	遇	模	見	<i>hekou</i>	1	<i>qu</i>	k̥ʊo	k̥ʊo	ko	R	ko
2744	鉅	山	寒	匣	<i>kaikou</i>	1	<i>qu</i>	ɸan	ɸan	han	R	han
2745	豐	臻	文	微	<i>hekou</i>	3	<i>qu</i>	miun	miun	mun	R	mun
2746	瑕	假	麻	匣	<i>kaikou</i>	2	<i>ping</i>	ɸ ^y æ	ɸ ^y a	ha	L	ha
2747	綻	山	山	澄	<i>kaikou</i>	2	<i>qu</i>	d̥ ^y ɛn	d̥ ^y ɛn	tʰan	R	tʰan
2748	幃	臻	文	奉	<i>hekou</i>	3	<i>qu</i>	biun	biun	pun	R	pun
2749	釘	梗	青	端	<i>kaikou</i>	4	<i>ping</i>	teŋ	teŋ	tiəŋ	L	tɕəŋ
2750	鉸	效	肴	見	<i>kaikou</i>	2	<i>shang</i>	k ^y æu	k ^y au	kio	H	kjo
2751	箴	山	屑	明	<i>kaikou</i>	4	<i>ru</i>	met	met	miəl	H	mjəl
2752	籊	遇	模	見	<i>hekou</i>	1	<i>ping</i>	k̥ʊo	k̥ʊo	ko	L	ko
2753	橫	梗	庚	匣	<i>hekou</i>	2	<i>ping</i>	ɸ ^{wy} æŋ	ɸ ^{wy} aŋ	hoiŋ	L	høŋ
2754	斜	假	麻	邪	<i>kaikou</i>	3	<i>ping</i>	ziæ	zia	sia	L	sa
2755	欹	止	支	溪	<i>kaikou</i>	3B	<i>ping</i>	kʰ ^y iɛ	kʰ ^y ie	kii	L	ki
2756	歪	蟹	佳	曉	<i>hekou</i>	2	<i>ping</i>	h ^{wy} ɛ	h ^{wy} e	koi	H	kø
2757	牟	山	先	精	<i>kaikou</i>	4	<i>qu</i>	tsen	tsen	tsiən	H	tɕən
2758	拄	遇	虞	知	<i>hekou</i>	3	<i>shang</i>	t̥iʊɔ	t̥iʊo	tiu	R	tɕu

2759	搯	止	支	章	<i>kaikou</i>	3	<i>ping</i>	teiɛ	teiɛ	tsi	L	tei
2760	拑	遇	模	疑	<i>hekou</i>	1	<i>qu</i>	ŋɯo	ŋɯo	o	L	o
2761	頽	蟹	灰	定	<i>hekou</i>	1	<i>ping</i>	d ^w oi	d ^w oi	t ^h oi	L	t ^h ø
2762	圮	止	脂	並	<i>kaikou</i>	3B	<i>shang</i>	b ^y i	b ^y i	p ^h i	R	p ^h i
2763	圯	咸	談	透	<i>kaikou</i>	1	<i>ping</i>	t ^h am	t ^h am	tan	L	tam
2764	塌	咸	盍	透	<i>kaikou</i>	1	<i>ru</i>	t ^h ap	t ^h ap	t ^h ap	H	t ^h ap
2765	𡵓	流	尤	莊	<i>kaikou</i>	3	<i>qu</i>	tɕiu	tɕəu	ts ^h iu	L	tɕ ^h u
2766	砌	蟹	齊	清	<i>kaikou</i>	4	<i>qu</i>	ts ^h ei	ts ^h ei	ts ^h iəi	R	tɕ ^h e
2767	築	通	屋	知	<i>hekou</i>	3	<i>ru</i>	ʈiuk	ʈiuk	t ^h iuk	R	tɕ ^h uk
2768	壘	止	脂	來	<i>hekou</i>	3	<i>shang</i>	l ^w i	l ^w i	liu	R	lju
2769	傾	梗	清	溪	<i>hekou</i>	3A	<i>ping</i>	k ^h iɛŋ	k ^h iɛŋ	kiəŋ	H	kjʌŋ
2770	仄	曾	職	莊	<i>kaikou</i>	3	<i>ru</i>	tɕik	tɕiək	ts ^h ik	H	tɕ ^h uɪk
2771	撼	咸	覃	匣	<i>kaikou</i>	1	<i>shang</i>	ɦəm	ɦəm	ham	R	ham
2772	搯	咸	覃	精	<i>kaikou</i>	1	<i>shang</i>	tsəm	tsəm	tsam	R	team
2773	撐	梗	庚	徹	<i>kaikou</i>	2	<i>ping</i>	t ^h yæŋ	t ^h yæŋ	t ^h ʌiŋ	L	t ^h æŋ
2774	菴	咸	添	定	<i>kaikou</i>	4	<i>qu</i>	dem	dem	tiəm	R	tɕʌm
2775	𡵓	咸	盍	心	<i>kaikou</i>	1	<i>ru</i>	sap	sap	sap	H	sap
2776	歧	止	支	見	<i>hekou</i>	3B	<i>shang</i>	k ^w yɛ	k ^w yɛ	kuəi	R	kwe
2777	坑	梗	庚	溪	<i>kaikou</i>	2	<i>ping</i>	k ^h yæŋ	k ^h yæŋ	kʌiŋ	L	kæŋ
2778	坎	咸	覃	溪	<i>kaikou</i>	1	<i>shang</i>	k ^h əm	k ^h əm	kam	R	kam

2779	坳	效	肴	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^y æu	ʔ ^y au	io	L	jo
2780	陷	咸	咸	匣	<i>kaikou</i>	2	<i>qu</i>	ɦ ^y em	ɦ ^y em	ham	R	ham
2781	磽	效	肴	溪	<i>kaikou</i>	2	<i>ping</i>	k ^h yæu	k ^h yau	kio	L	kjo
2782	确	江	覺	匣	<i>kaikou</i>	2	<i>ru</i>	ɦ ^y ɔk	ɦ ^y ok	kak	H	kak
2783	堦	梗	昔	從	<i>kaikou</i>	3	<i>ru</i>	dziek	dziek	ts ^h iək	H	te ^h ʌk
2784	瀉	梗	昔	心	<i>kaikou</i>	3	<i>ru</i>	siek	siek	siək	H	sək
2785	溜	流	尤	來	<i>kaikou</i>	3	<i>qu</i>	liu	ləu	liu	R	lju
2786	葍	流	侯	見	<i>kaikou</i>	1	<i>ping</i>	ku	ku	ku	L	ku
2787	基	止	之	見	<i>kaikou</i>	3	<i>ping</i>	ki	kə	kii	L	ki
2788	址	止	之	章	<i>kaikou</i>	3	<i>shang</i>	tɕi	tɕə	tsi	H	tei
2789	寃	假	麻	疑	<i>hekou</i>	2	<i>qu</i>	ŋ ^w yæ	ŋ ^w ya	oa	R	wa
2790	苦	咸	鹽	書	<i>kaikou</i>	3	<i>qu</i>	ɕiem	ɕiem	siəm	R	səm
2791	稇	臻	諄	章	<i>hekou</i>	3	<i>qu</i>	tɕ ^w in	tɕ ^w in	tsiun	R	tɕun
2792	籊	梗	麥	見	<i>kaikou</i>	2	<i>ru</i>	k ^y ek	k ^y ek	kiək	H	kjʌk
2793	孔	通	東	溪	<i>hekou</i>	1	<i>shang</i>	k ^h uŋ	k ^h uŋ	koŋ	H	koŋ
2794	穴	山	屑	匣	<i>kaikou</i>	4	<i>ru</i>	ɦet	ɦet	hiəl	H	hjʌl
2795	窟	臻	沒	溪	<i>hekou</i>	1	<i>ru</i>	k ^h uot	k ^h uot	kul	H	kul
2796	寵	通	東	合	<i>kaikou</i>	1	<i>shang</i>	luŋ	luŋ	loŋ	R	loŋ
2797	罅	假	麻	曉	<i>kaikou</i>	2	<i>qu</i>	h ^y æ	h ^y a	ha	L	ha
2798	覺	臻	真	曉	<i>kaikou</i>	3B	<i>qu</i>	h ^y in	h ^y in	hin	R	huun

2799	阿	果	歌	影	<i>kaikou</i>	1	<i>ping</i>	ʔa	ʔa	a	L	a
2800	隙	梗	陌	溪	<i>kaikou</i>	3	<i>ru</i>	k ^{hi} æk	k ^{hi} ak	kik	H	kuuk
2801	塵	臻	真	澄	<i>kaikou</i>	3	<i>ping</i>	ɕin	ɕin	tin	L	tein
2802	埃	蟹	哈	影	<i>kaikou</i>	1	<i>ping</i>	ʔəi	ʔəi	ai	L	æ
2803	盆	臻	文	奉	<i>hekou</i>	3	<i>shang</i>	biun	biun	pun	R	pun
2804	塢	通	東	影	<i>hekou</i>	1	<i>shang</i>	ʔuŋ	ʔuŋ	oŋ	R	oŋ
2805	垢	流	侯	見	<i>kaikou</i>	1	<i>shang</i>	ku	ku	ku	R	ku
2806	圻	山	黠	見	<i>kaikou</i>	2	<i>ru</i>	k ^ʰ et	k ^ʰ et	kal	H	kal
2807	塊	蟹	灰	溪	<i>hekou</i>	1	<i>qu</i>	k ^{hw} oi	k ^{hw} oi	koi	R	kø
2808	塢	曾	職	滂	<i>kaikou</i>	3	<i>ru</i>	p ^{hi} ik	p ^{hi} iək	piək	H	pjʌk
2809	居	遇	魚	見	<i>hekou</i>	3	<i>ping</i>	kiɤ	kio	kə	L	kʌ
2810	處	遇	魚	昌	<i>hekou</i>	3	<i>shang</i>	tɕ ^{hi} ɤ	tɕ ^{hi} io	ts ^{hi} ə	R	tɕ ^{hi} ʌ
2811	器	止	脂	溪	<i>kaikou</i>	3B	<i>qu</i>	k ^h ʷi	k ^h ʷi	kii	H	ki
2812	皿	梗	庚	明	<i>kaikou</i>	3	<i>shang</i>	miæŋ	miaŋ	miəŋ	R	mjʌŋ
2813	衣	止	微	影	<i>kaikou</i>	3	<i>ping</i>	ʔii	ʔəi	ii	L	ui
2814	服	通	屋	奉	<i>hekou</i>	3	<i>ru</i>	biuk	biuk	pok	H	pok
2815	財	蟹	哈	從	<i>kaikou</i>	1	<i>ping</i>	dzəi	dzəi	tsʌi	L	tɕæ
2816	貨	果	戈	曉	<i>hekou</i>	1	<i>qu</i>	h ^w a	h ^w a	hoa	R	hwa
2817	豐	通	東	敷	<i>hekou</i>	3	<i>ping</i>	p ^{hi} uŋ	p ^{hi} uŋ	p ^h uŋ	L	p ^h uŋ
2818	稔	深	侵	日	<i>kaikou</i>	3	<i>shang</i>	ɲim	ɲim	nim	R	nim

2819	飽	效	肴	幫	<i>kaikou</i>	2	<i>shang</i>	p ^ɥ æu	p ^ɥ au	p ^h o	R	p ^h o
2820	𩚑	遇	魚	影	<i>hekou</i>	3	<i>qu</i>	ʔiɿ	ʔio	ə	R	ʌ
2821	歉	咸	添	溪	<i>kaikou</i>	4	<i>shang</i>	k ^h em	k ^h em	kiəm	R	kjʌm
2822	儉	咸	鹽	群	<i>kaikou</i>	3B	<i>shang</i>	g ^ɥ iɛm	g ^ɥ iɛm	kəm	R	kʌm
2823	餒	蟹	灰	泥	<i>hekou</i>	1	<i>shang</i>	n ^w oi	n ^w oi	noi	R	nø
2824	餓	果	歌	疑	<i>kaikou</i>	1	<i>qu</i>	ŋa	ŋa	a	R	a
2825	縑	效	豪	心	<i>kaikou</i>	1	<i>ping</i>	sau	sau	so	L	so
2826	繹	梗	昔	以	<i>kaikou</i>	3	<i>ru</i>	jiɛk	jiɛk	iək	H	jʌk
2827	紡	宕	陽	敷	<i>kaikou</i>	3	<i>shang</i>	p ^h iaŋ	p ^h iaŋ	paŋ	L	paŋ
2828	絡	宕	鐸	來	<i>kaikou</i>	1	<i>ru</i>	lak	lak	lak	H	lak
2829	緝	深	緝	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h ip	ts ^h ip	tsip	H	tɕup
2830	績	梗	錫	精	<i>kaikou</i>	4	<i>ru</i>	tsek	tsek	tsiək	H	tɕʌk
2831	紕	深	侵	日	<i>kaikou</i>	3	<i>qu</i>	ɳim	ɳim	zim	R	im
2832	織	曾	職	章	<i>kaikou</i>	3	<i>ru</i>	tɕik	tɕiək	tsik	H	tɕik
2833	紺	咸	覃	見	<i>kaikou</i>	1	<i>qu</i>	kəm	kəm	kam	R	kam
2834	緞	流	尤	莊	<i>kaikou</i>	3	<i>ping</i>	tɕiu	tɕəu	ts ^h iu	L	tɕ ^h u
2835	纁	臻	文	曉	<i>hekou</i>	3	<i>ping</i>	hiun	hiun	hun	L	hun
2836	緗	宕	陽	心	<i>kaikou</i>	3	<i>ping</i>	siaŋ	siaŋ	siaŋ	L	saŋ
2837	裁	蟹	哈	從	<i>kaikou</i>	1	<i>ping</i>	dzəi	dzəi	tsʌi	L	tɕæ
2838	縫	通	鍾	奉	<i>hekou</i>	3	<i>ping</i>	biɸoŋ	biɸoŋ	poŋ	L	poŋ

2839	繡	流	尤	心	<i>kaikou</i>	3	<i>qu</i>	siu	səu	siu	H	su
2840	刺	梗	昔	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h iɛk	ts ^h iek	ts ^h iək	H	tɕ ^h ʌk
2841	穿	山	仙	昌	<i>hekou</i>	3	<i>ping</i>	tɕ ^h wiɛn	tɕ ^h wien	ts ^h iən	L	tɕ ^h ʌn
2842	着	宕	藥	知	<i>kaikou</i>	3	<i>ru</i>	tɕiak	tɕiak	t ^h iak	H	tɕ ^h ak
2843	摳	流	侯	溪	<i>kaikou</i>	1	<i>ping</i>	k ^h u	k ^h u	ku	L	ku
2844	攘	山	仙	溪	<i>kaikou</i>	3B	<i>ping</i>	k ^h ʷiɛn	k ^h ʷien	kən	H	kʌn
2845	裸	果	戈	來	<i>hekou</i>	1	<i>shang</i>	l ^w a	l ^w a	la	H	la
2846	裡	梗	清	澄	<i>kaikou</i>	3	<i>ping</i>	d̪iɛŋ	d̪iɛŋ	tiəŋ	L	tɕʌŋ
2847	袒	山	寒	定	<i>kaikou</i>	1	<i>shang</i>	dan	dan	t ^h an	L	t ^h an
2848	謁	梗	錫	心	<i>kaikou</i>	4	<i>ru</i>	sek	sek	t ^h iək	H	sʌk
2849	套	效	豪	透	<i>kaikou</i>	1	<i>qu</i>	t ^h au	t ^h au	t ^h o	L	t ^h u
2850	搭	咸	盍	透	<i>kaikou</i>	1	<i>ru</i>	t ^h ap	t ^h ap	t ^h ap	H	t ^h ap
2851	鞞	止	支	並	<i>kaikou</i>	3B	<i>qu</i>	b ^ʷ iɛ	b ^ʷ ie	p ^h i	R	p ^h i
2852	輓	山	桓	明	<i>hekou</i>	1	<i>ping</i>	m ^w an	m ^w an	man	L	man
2853	裝	宕	陽	莊	<i>kaikou</i>	3	<i>ping</i>	tɕian	tɕian	tsaŋ	L	tɕaŋ
2854	鎛	止	之	莊	<i>kaikou</i>	3	<i>qu</i>	tɕi	tɕə	sʌ	R	sa
2855	嵌	咸	銜	溪	<i>kaikou</i>	2	<i>ping</i>	k ^h ʷæm	k ^h ʷam	kam	L	kam
2856	塑	遇	模	心	<i>hekou</i>	1	<i>qu</i>	sɿo	sɿo	so	R	so
2857	粧	宕	陽	莊	<i>kaikou</i>	3	<i>ping</i>	tɕian	tɕian	tsaŋ	L	tɕaŋ
2858	扮	山	山	幫	<i>kaikou</i>	2	<i>qu</i>	p ^ʷ ɛn	p ^ʷ ɛn	pan	R	pan

2859	搽	假	麻	澄	<i>kaikou</i>	2	<i>ping</i>	ɕʰæ	ɕʰa	tsʰa	L	tɕʰa
2860	抹	山	末	明	<i>hekou</i>	1	<i>ru</i>	m ^w at	m ^w at	mal	H	mal
2861	褪	臻	魂	透	<i>hekou</i>	1	<i>qu</i>	tʰuon	tʰuon	ton	R	ton
2862	卸	假	麻	心	<i>kaikou</i>	3	<i>qu</i>	siæ	sia	sia	H	sa
2863	襪	咸	談	來	<i>kaikou</i>	1	<i>ping</i>	lam	lam	lam	L	lam
2864	襖	遇	虞	來	<i>hekou</i>	3	<i>shang</i>	liuɔ	liuɔ	lu	R	lu
2865	圖	遇	模	定	<i>hekou</i>	1	<i>ping</i>	duo	duo	to	L	to
2866	寫	假	麻	心	<i>kaikou</i>	3	<i>shang</i>	siæ	sia	sia	R	sa
2867	描	效	宵	明	<i>kaikou</i>	3B	<i>ping</i>	m ^y ieu	m ^y ieu	mio	L	mjo
2868	罨	咸	合	影	<i>kaikou</i>	1	<i>ru</i>	ʔəp	ʔəp	ap	H	ap
2869	紋	臻	文	微	<i>hekou</i>	3	<i>ping</i>	miun	miun	mun	L	mun
2870	綵	蟹	哈	清	<i>kaikou</i>	1	<i>shang</i>	tsʰəi	tsʰəi	tsʰai	R	tɕʰæ
2871	繪	蟹	泰	匣	<i>kaikou</i>	1	<i>qu</i>	ɬai	ɬai	hoi	R	hø
2872	飾	曾	職	書	<i>kaikou</i>	3	<i>ru</i>	ɕik	ɕiək	sik	H	sik
2873	誑	宕	陽	群	<i>hekou</i>	3	<i>qu</i>	g ^w iaŋ	g ^w iaŋ	koaŋ	R	kwaŋ
2874	賺	咸	咸	澄	<i>kaikou</i>	2	<i>qu</i>	ɕ ^y em	ɕ ^y em	tam	R	tam
2875	騙	山	仙	滂	<i>kaikou</i>	3A	<i>qu</i>	pʰien	pʰien	pʰiən	R	pʰjʌn
2876	拐	蟹	佳	見	<i>hekou</i>	2	<i>shang</i>	k ^w ɛ	k ^w ɛ	koai	H	koæ
2877	搏	宕	鐸	幫	<i>kaikou</i>	1	<i>ru</i>	pak	pak	pak	H	pak
2878	換	山	桓	匣	<i>hekou</i>	1	<i>qu</i>	ɬ ^w an	ɬ ^w an	hoan	H	hwan

2879	耀	效	蕭	透	<i>kaikou</i>	4	<i>qu</i>	t ^h eu	t ^h eu	tio	H	tɛo
2880	糴	梗	錫	定	<i>kaikou</i>	4	<i>ru</i>	dek	dek	tiək	H	tɛɿk
2881	租	遇	模	精	<i>hekou</i>	1	<i>ping</i>	tsɿo	tsɿo	tso	L	tɛo
2882	稅	蟹	祭	書	<i>hekou</i>	3	<i>qu</i>	ɕ ^w iɛi	ɕ ^w iɛi	siəi	R	se
2883	貢	通	東	見	<i>hekou</i>	1	<i>qu</i>	kuŋ	kuŋ	koŋ	R	koŋ
2884	納	咸	合	泥	<i>kaikou</i>	1	<i>ru</i>	nəp	nəp	nap	H	nap
2885	徵	曾	蒸	知	<i>kaikou</i>	3	<i>ping</i>	tʃiŋ	tʃiəŋ	tiŋ	L	tɛiŋ
2886	歛	咸	鹽	來	<i>kaikou</i>	3	<i>shang</i>	liɛm	liɛm	liəm	R	ljɿm
2887	課	果	戈	溪	<i>hekou</i>	1	<i>qu</i>	k ^h wa	k ^h wa	koa	R	kwa
2888	式	曾	職	書	<i>kaikou</i>	3	<i>ru</i>	ɕik	ɕiək	sik	H	sik
2889	售	流	尤	禪	<i>kaikou</i>	3	<i>qu</i>	dziu	dzəu	siu	H	su
	衍	山	先	匣	<i>hekou</i>	4	<i>qu</i>	f ^h en	f ^h en	hiən	R	hjɿn
2891	賣	蟹	佳	明	<i>kaikou</i>	2	<i>qu</i>	m ^ʷ ɛ	m ^ʷ e	mai	R	mæ
2892	鬻	通	屋	以	<i>hekou</i>	3	<i>ru</i>	jiuk	jiuk	iuk	H	juk
2893	沽	遇	模	見	<i>hekou</i>	1	<i>ping</i>	kɿo	kɿo	ko	L	ko
2894	買	蟹	佳	明	<i>kaikou</i>	2	<i>shang</i>	m ^ʷ ɛ	m ^ʷ e	mɿi	R	mæ
2895	購	流	侯	見	<i>kaikou</i>	1	<i>qu</i>	ku	ku	ku	R	ku
2896	貿	流	侯	明	<i>kaikou</i>	1	<i>qu</i>	mu	mu	mu	R	mu
2897	賒	假	麻	書	<i>kaikou</i>	3	<i>ping</i>	ɕiæ	ɕia	sia	L	sa
2898	貰	蟹	祭	書	<i>kaikou</i>	3	<i>qu</i>	ɕiei	ɕiei	siəi	R	se

2899	販	山	元	非	hekou	3	qu	p ^w iɤn	p ^w ion	p ^h an	H	p ^h an
2900	贗	山	刪	疑	kaikou	2	qu	ŋ ^ʷ æɤn	ŋ ^ʷ an	an	R	an
2901	貼	咸	帖	透	kaikou	4	ru	t ^h ep	t ^h ep	t ^h iəp	H	tɕ ^h ʌp
2902	賧	咸	鹽	來	kaikou	3	qu	liɛm	liem	liəm	R	ljʌm
2903	賃	深	侵	娘	kaikou	3	qu	ŋim	ŋim	nim	R	nim
2904	儼	流	尤	精	kaikou	3	qu	tsiu	tsəu	ts ^h iui	R	tɕ ^h u
2905	賄	蟹	灰	曉	hekou	1	shang	h ^ʷ oi	h ^ʷ oi	hoi	R	hø
2906	賂	遇	模	來	hekou	1	qu	l ^ʷ o	l ^ʷ o	loi	R	lø
2907	贈	曾	登	從	kaikou	1	qu	dzəŋ	dzəŋ	tsiŋ	R	tɕuŋ
2908	貽	止	之	以	kaikou	3	ping	jɿ	jə	i	L	i
2909	賞	宕	陽	書	kaikou	3	shang	ɕiaŋ	ɕiaŋ	siaŋ	R	saŋ
2910	賜	止	支	心	kaikou	3	qu	siɛ	sie	sʌ	R	sa
2911	給	深	緝	見	kaikou	3B	ru	k ^ʷ ip	k ^ʷ ip	kɪp	H	kup
2912	賚	蟹	哈	來	kaikou	1	shang	lɔi	lɔi	loi	R	lø
2913	贖	通	燭	船	hekou	3	ru	zi ^ʷ ok	zi ^ʷ ok	siok	H	sok
2914	債	蟹	佳	莊	kaikou	2	qu	tɕ ^ʷ ɛ	tɕ ^ʷ ɛ	ts ^h ai	H	tɕ ^h æ
2915	陪	蟹	灰	並	kaikou	1	ping	boi	boi	pʌi	L	pæ
2916	償	宕	陽	禪	kaikou	3	ping	dziaŋ	dziaŋ	siaŋ	L	saŋ
2917	乞	臻	迄	溪	kaikou	3	ru	k ^h it	k ^h iət	kəl	H	kʌl
2918	假	假	麻	見	kaikou	2	shang	k ^ʷ æ	k ^ʷ a	ka	R	ka

2919	借	假	麻	精	<i>kaikou</i>	3	<i>qu</i>	tsiæ	tsia	ts ^h ia	R	tɕ ^h a
2920	貸	蟹	哈	透	<i>kaikou</i>	1	<i>shang</i>	t ^h əi	t ^h əi	tai	R	tæ
2921	籤	咸	鹽	清	<i>kaikou</i>	3	<i>ping</i>	ts ^h iɛm	ts ^h iɛm	ts ^h iəm	L	tɕ ^h ɛm
2922	籌	流	尤	澄	<i>kaikou</i>	3	<i>ping</i>	ɕiu	ɕiəu	tiu	L	tɕeu
2923	占	咸	鹽	章	<i>kaikou</i>	3	<i>ping</i>	tɕiɛm	tɕiɛm	tsiəm	L	tɕɛm
2924	筮	蟹	祭	禪	<i>kaikou</i>	3	<i>qu</i>	dziɛi	dziei	siə	R	sɛ
2925	擣	遇	魚	徹	<i>hekou</i>	3	<i>ping</i>	t ^h iɿ	t ^h io	tiə	L	tɕɛ
2926	菰	遇	模	並	<i>hekou</i>	1	<i>ping</i>	bɿo	bɿo	p ^h o	L	p ^h o
2927	賭	遇	模	端	<i>hekou</i>	1	<i>shang</i>	tɿo	tɿo	to	R	to
2928	賽	蟹	哈	心	<i>kaikou</i>	1	<i>shang</i>	səi	səi	sai	H	sæ
2929	撒	山	寒	透	<i>kaikou</i>	1	<i>ping</i>	t ^h an	t ^h an	t ^h an	L	t ^h an
2930	擲	梗	昔	澄	<i>kaikou</i>	3	<i>ru</i>	ɕiek	ɕiek	t ^h iək	H	tɕ ^h ɛk
2931	拈	咸	添	泥	<i>kaikou</i>	4	<i>ping</i>	nem	nem	tsiəm	L	njɛm
2932	鬪	流	尤	見	<i>kaikou</i>	3	<i>ping</i>	kiu	kəu	ku	L	ku
2933	輪	遇	虞	書	<i>hekou</i>	3	<i>ping</i>	ɕiɿʊ	ɕiɿʊ	siu	L	su
2934	羸	梗	清	以	<i>kaikou</i>	3	<i>ping</i>	jiɛŋ	jiɛŋ	iəŋ	L	jɛŋ
2935	勝	曾	蒸	書	<i>kaikou</i>	3	<i>qu</i>	ɕiŋ	ɕiəŋ	siŋ	R	suŋ
2936	敗	蟹	夬	並	<i>kaikou</i>	2	<i>qu</i>	b ^ɥ æi	b ^ɥ ai	p ^h ai	R	p ^h æ
2937	搔	效	豪	心	<i>kaikou</i>	1	<i>ping</i>	sau	sau	so	L	so
2938	爬	假	麻	並	<i>kaikou</i>	2	<i>ping</i>	b ^ɥ æ	b ^ɥ a	p ^h a	L	p ^h a

2939	抓	效	肴	莊	<i>kaikou</i>	2	<i>shang</i>	tɕʰæu	tɕʰau	koa	R	tɕo
2940	掐	咸	洽	溪	<i>kaikou</i>	2	<i>ru</i>	kʰɛp	kʰɛp	kiəp	H	kjɿp
2941	攬	假	麻	影	<i>hekou</i>	2	<i>ping</i>	ʔʷæ	ʔʷa	oa	L	wa
2942	捧	通	鍾	敷	<i>hekou</i>	3	<i>shang</i>	pʰiɿŋ	pʰiɿŋ	poŋ	R	poŋ
2943	抔	流	侯	並	<i>kaikou</i>	1	<i>ping</i>	bu	bu	pu	L	pu
2944	掬	通	屋	見	<i>hekou</i>	3	<i>ru</i>	kiuk	kiuk	kuk	L	kuk
2945	搜	流	尤	生	<i>kaikou</i>	3	<i>ping</i>	ɕiu	ɕəu	su	L	su
2946	探	咸	覃	透	<i>kaikou</i>	1	<i>ping</i>	tʰəm	tʰəm	tʰam	L	tʰam
2947	括	山	末	見	<i>hekou</i>	1	<i>ru</i>	kʷan	kʷan	koal	H	kwal
2948	檢	咸	鹽	見	<i>kaikou</i>	3B	<i>shang</i>	kʰiɛm	kʰiɛm	kəm	R	kɿm
2949	蘸	咸	咸	莊	<i>kaikou</i>	2	<i>qu</i>	tɕʰɛm	tɕʰɛm	tsam	R	tɕam
2950	扭	流	尤	娘	<i>kaikou</i>	3	<i>shang</i>	ɳiu	ɳəu	niu	R	ɳju
2951	撈	效	豪	來	<i>kaikou</i>	1	<i>ping</i>	lau	lau	lo	L	lo
2952	漉	通	屋	來	<i>hekou</i>	1	<i>ru</i>	luk	luk	lok	H	lok
2953	攬	咸	談	來	<i>kaikou</i>	1	<i>shang</i>	lam	lam	lam	R	lam
2954	搜	流	侯	來	<i>kaikou</i>	1	<i>ping</i>	lu	lu	lu	L	lu
2955	抄	遇	模	並	<i>hekou</i>	1	<i>qu</i>	bɿo	bɿo	po	R	po
2956	攪	遇	模	來	<i>hekou</i>	1	<i>ping</i>	lɿo	lɿo	lo	L	lo
2957	抖	流	侯	端	<i>kaikou</i>	1	<i>shang</i>	tu	tu	tu	H	tu
2958	攪	流	侯	心	<i>kaikou</i>	1	<i>shang</i>	su	su	su	R	su

2959	搓	果	歌	清	<i>kaikou</i>	1	<i>ping</i>	ts ^h a	ts ^h a	ts ^h a	L	tɕ ^h a
2960	挪	果	歌	泥	<i>kaikou</i>	1	<i>ping</i>	na	na	na	L	na
2961	捻	咸	帖	泥	<i>kaikou</i>	4	<i>ru</i>	nep	nep	niəp	H	njʌp
2962	捏	山	屑	泥	<i>kaikou</i>	4	<i>ru</i>	net	net	niəl	H	nal
2963	撚	山	先	泥	<i>kaikou</i>	4	<i>shang</i>	nen	nen	niən	R	njʌn
2964	搥	山	薛	明	<i>kaikou</i>	3A	<i>ru</i>	miət	miət	miəl	H	mjʌl
2965	擷	山	元	奉	<i>hekou</i>	3	<i>ping</i>	b ^w iɤn	b ^w ion	pən	L	pʌn
2966	攪	山	仙	日	<i>hekou</i>	3	<i>ping</i>	ŋ ^w iɛn	ŋ ^w ien	ziən	L	jʌn
2967	掇	果	戈	泥	<i>hekou</i>	1	<i>ping</i>	n ^w a	n ^w a	na	L	na
2968	抄	果	歌	心	<i>kaikou</i>	1	<i>qu</i>	sa	sa	sa	L	sa
2969	擡	蟹	哈	定	<i>kaikou</i>	1	<i>ping</i>	dəi	dəi	tʌi	L	tæ
2970	扛	江	江	見	<i>kaikou</i>	2	<i>ping</i>	kɔŋ	kɔŋ	kaŋ	L	kaŋ
2971	擔	咸	談	端	<i>kaikou</i>	1	<i>qu</i>	tam	tam	tam	R	tam
2972	擷	江	江	曉	<i>kaikou</i>	2	<i>shang</i>	hɔŋ	hɔŋ	hiaŋ	R	hjaŋ
2973	拂	臻	物	敷	<i>hekou</i>	3	<i>ru</i>	p ^h iun	p ^h iun	pil	H	pul
2974	拭	曾	職	書	<i>kaikou</i>	3	<i>ru</i>	ɕik	ɕiək	sik	H	sik
2975	搵	臻	魂	影	<i>hekou</i>	1	<i>qu</i>	ʔɯon	ʔɯon	on	R	on
2976	揩	蟹	皆	溪	<i>kaikou</i>	2	<i>ping</i>	k ^h ɤi	k ^h ɤi	kʌi	L	kæ
2977	負	流	尤	奉	<i>kaikou</i>	3	<i>shang</i>	biu	biəu	pu	R	pu
2978	戴	蟹	哈	端	<i>kaikou</i>	1	<i>shang</i>	təi	təi	tʌi	R	tæ

2979	馱	果	歌	定	<i>kaikou</i>	1	<i>ping</i>	da	da	t ^h a	L	t ^h a
2980	載	蟹	哈	精	<i>kaikou</i>	1	<i>shang</i>	tsəi	tsəi	tsɿ	R	tɛæ
2981	擠	蟹	齊	精	<i>kaikou</i>	4	<i>ping</i>	tsei	tsei	tsiəi	L	tɛe
2982	拶	山	曷	精	<i>kaikou</i>	1	<i>ru</i>	tsan	tsan	ts ^h al	H	tɕ ^h al
2983	排	蟹	皆	並	<i>kaikou</i>	2	<i>ping</i>	b ^y ei	b ^y ei	pɿ	L	pæ
2984	挨	蟹	皆	影	<i>kaikou</i>	2	<i>ping</i>	ʔ ^y ei	ʔ ^y ei	ai	L	æ
2985	吾	遇	模	疑	<i>hekou</i>	1	<i>ping</i>	ŋʊo	ŋʊo	o	L	o
2986	我	果	歌	疑	<i>kaikou</i>	1	<i>shang</i>	ŋa	ŋa	a	R	a
2987	予	遇	魚	以	<i>hekou</i>	3	<i>ping</i>	jɿ	jio	iə	L	jɿ
2988	俺	咸	鹽	影	<i>kaikou</i>	3B	<i>qu</i>	ʔ ^y iɛm	ʔ ^y iɛm	am	L	am
2989	咱	果	歌	從	<i>kaikou</i>	1	<i>ping</i>	dza	dza	tsa ³⁸²	L	tɕ ^h al
2990	自	止	脂	從	<i>kaikou</i>	3	<i>qu</i>	dzi	dzi	tsɿ	H	tɛa
2991	他	果	歌	透	<i>kaikou</i>	1	<i>ping</i>	t ^h a	t ^h a	t ^h a	L	t ^h a
2992	彼	止	支	幫	<i>kaikou</i>	3B	<i>shang</i>	p ^y iɛ	p ^y iɛ	p ^h i	R	p ^h i
2993	誰	止	脂	禪	<i>hekou</i>	3	<i>ping</i>	dz ^w i	dz ^w i	siu	L	su
2994	孰	通	屋	禪	<i>hekou</i>	3	<i>ru</i>	dziuk	dziuk	siuk	H	suk
2995	伊	止	脂	影	<i>kaikou</i>	3A	<i>ping</i>	ʔi	ʔi	i	L	i
2996	某	流	侯	明	<i>kaikou</i>	1	<i>shang</i>	mu	mu	mo	R	mo

³⁸²Also [tsam] (R tone)

2997	你	止	之	娘	<i>kaikou</i>	3	<i>shang</i>	ɲi	ɲə	ni	H	ni
2998	恁	深	侵	日	<i>kaikou</i>	3	<i>qu</i>	ɲim	ɲim	nim	R	nim
2999	汝	遇	魚	日	<i>hekou</i>	3	<i>shang</i>	ɲiɤ	ɲio	ziə	R	jʌ
3000	爾	止	支	日	<i>kaikou</i>	3	<i>shang</i>	ɲiɛ	ɲie	zi	L	i
3001	儕	蟹	皆	崇	<i>kaikou</i>	2	<i>ping</i>	dzʰei	dzʰei	tsiəi	R	tɕe
3002	輩	蟹	灰	幫	<i>kaikou</i>	1	<i>qu</i>	poi	poi	pʌi	R	pæ
3003	廝	止	支	心	<i>kaikou</i>	3	<i>ping</i>	siɛ	sie	sii	L	si
3004	每	蟹	灰	明	<i>kaikou</i>	1	<i>ping</i>	moi	moi	mʌi	L	mæ
3005	冤	山	元	影	<i>hekou</i>	3	<i>ping</i>	ʔwɪn	ʔwɪon	uən	L	wʌn
3006	讎	流	尤	禪	<i>kaikou</i>	3	<i>ping</i>	dziu	dzəu	siu	L	su
3007	仇	流	尤	群	<i>kaikou</i>	3	<i>ping</i>	giu	gəu	ku	L	ku
3008	敵	梗	錫	定	<i>kaikou</i>	4	<i>ru</i>	dek	dek	tiək	H	tɕʌk
3009	偷	流	侯	透	<i>kaikou</i>	1	<i>ping</i>	tʰu	tʰu	tʰu	L	tʰu
3010	竊	山	屑	清	<i>kaikou</i>	4	<i>ru</i>	tsʰet	tsʰet	tsiəl	H	tɕəl
3011	攘	宕	陽	日	<i>kaikou</i>	3	<i>shang</i>	ɲiaŋ	ɲiaŋ	ziaŋ	H	jaŋ
3012	奪	山	末	定	<i>hekou</i>	1	<i>ru</i>	dʷan	dʷan	tʰal	H	tʰal
3013	搶	宕	陽	清	<i>kaikou</i>	3	<i>shang</i>	tsʰiaŋ	tsʰiaŋ	tsʰaŋ	H	tɕʰaŋ
3014	掠	宕	藥	來	<i>kaikou</i>	3	<i>ru</i>	liak	liak	liak	H	ljak
3015	俘	遇	虞	敷	<i>hekou</i>	3	<i>ping</i>	pʰiɤ	pʰiɤ	pu	L	pu
3016	馘	梗	麥	見	<i>hekou</i>	2	<i>ru</i>	kʷɛk	kʷɛk	koik	H	kək

3017	聖	梗	清	書	<i>kaikou</i>	3	<i>qu</i>	ɕiɛŋ	ɕiɛŋ	siəŋ	R	sɔŋ
3018	賢	山	先	匣	<i>kaikou</i>	4	<i>ping</i>	ɦen	ɦen	hiən	L	ɦjɔn
3019	廉	咸	鹽	來	<i>kaikou</i>	3	<i>ping</i>	liɛm	liɛm	liəm	L	ljɔm
3020	哲	山	薛	知	<i>kaikou</i>	3	<i>ru</i>	t͡ɕiɛt	t͡ɕiɛt	tʰiəl	H	tɕʰɔl
3021	豪	效	豪	匣	<i>kaikou</i>	1	<i>ping</i>	ɦau	ɦau	ho	L	ho
3022	傑	山	薛	群	<i>kaikou</i>	3B	<i>ru</i>	gʷiɛt	gʷiɛt	kəl	H	kɔl
3023	俊	臻	諄	精	<i>hekou</i>	3	<i>qu</i>	tsʷim	tsʷim	tsiun	R	tɕun
3024	乂	蟹	廢	疑	<i>kaikou</i>	3	<i>qu</i>	ŋiai	ŋiai	iəi	R	je
3025	仁	臻	真	日	<i>kaikou</i>	3	<i>ping</i>	ɲin	ɲin	zin	L	in
3026	慈	止	之	從	<i>kaikou</i>	3	<i>ping</i>	dzi	dzə	tsɔ	L	tɕə
3027	信	臻	真	心	<i>kaikou</i>	3	<i>qu</i>	sin	sin	sin	R	sin
3028	義	止	支	疑	<i>kaikou</i>	3B	<i>qu</i>	ŋʷiɛ	ŋʷiɛ	ii	R	ui
3029	忠	通	東	知	<i>hekou</i>	3	<i>ping</i>	t͡ɕiuŋ	t͡ɕiuŋ	tʰiuŋ	L	tɕʰuŋ
3030	恕	遇	魚	書	<i>hekou</i>	3	<i>qu</i>	ɕiɤ	ɕio	siə	R	sɔ
3031	孝	效	肴	曉	<i>kaikou</i>	2	<i>qu</i>	hʷæu	hʷau	hio	R	ɦjo
3032	悌	蟹	齊	定	<i>kaikou</i>	4	<i>qu</i>	dei	dei	tiəi	R	tɕe
3033	誠	梗	清	禪	<i>kaikou</i>	3	<i>ping</i>	dziɛŋ	dziɛŋ	siəŋ	L	sɔŋ
3034	敬	梗	庚	見	<i>kaikou</i>	3	<i>qu</i>	kiæŋ	kian	kiəŋ	R	kjɔŋ
3035	貞	梗	清	知	<i>kaikou</i>	3	<i>ping</i>	t͡ɕiɛŋ	t͡ɕiɛŋ	tiəŋ	L	tɕɔŋ
3036	烈	山	薛	來	<i>kaikou</i>	3	<i>ru</i>	liɛt	liɛt	liəl	R	ljɔl

3037	恭	通	鍾	見	hekou	3	ping	kiɿɔŋ	kiɿɔŋ	koŋ	L	koŋ
3038	讓	宕	陽	日	kaikou	3	qu	ŋiaŋ	ŋiaŋ	ziaŋ	R	jaŋ
3039	謹	臻	殷	見	kaikou	3	shang	kin	kiən	kin	R	kun
3040	慧	蟹	齊	匣	hekou	4	qu	ɦ ^w ei	ɦ ^w ei	hiəi	R	hje
3041	剛	宕	唐	見	kaikou	1	ping	kaŋ	kaŋ	kaŋ	L	kaŋ
3042	悍	山	寒	匣	kaikou	1	qu	ɦan	ɦan	han	H	han
3043	勇	通	鍾	以	hekou	3	shang	jiɿɔŋ	jiɿɔŋ	ioŋ	R	joŋ
3044	智	止	支	知	kaikou	3	qu	ʈiɛ	ʈiɛ	ti	L	tei
3045	強	宕	陽	群	kaikou	3	ping	giaŋ	giaŋ	kaŋ	L	kaŋ
3046	猛	梗	庚	明	kaikou	2	shang	m ^ʷ æŋ	m ^ʷ aŋ	mɿaŋ	R	mæŋ
3047	暴	效	豪	並	kaikou	1	qu	bau	bau	p ^h o	R	p ^h o
3048	武	遇	虞	微	hekou	3	shang	miɿɔ	miɿɔ	mu	R	mu
3049	尊	臻	魂	精	hekou	1	ping	tsɿon	tsɿon	tson	L	tɕon
3050	卑	止	支	幫	kaikou	3A	ping	piɛ	pie	pi	L	pi
3051	貴	止	微	見	hekou	3	qu	kii	kəi	kui	R	ky
3052	賤	山	仙	從	kaikou	3	qu	dziɛn	dzien	ts ^h iən	R	tɕ ^h ɿn
3053	壽	流	尤	禪	kaikou	3	shang	dziu	dzəu	siu	H	su
3054	夭	效	宵	影	kaikou	3B	shang	ʔ ^ʷ iɛu	ʔ ^ʷ ieu	io	R	jo
3055	貧	臻	真	並	kaikou	3B	ping	b ^ʷ in	b ^ʷ in	pin	L	pin
3056	富	流	尤	非	kaikou	3	qu	pɿu	pəu	pu	R	pu

3057	姿	止	脂	精	<i>kaikou</i>	3	<i>ping</i>	tsi	tsi	tsʌ	L	tea
3058	態	蟹	哈	透	<i>kaikou</i>	1	<i>shang</i>	tʰəi	tʰəi	tʰʌi	R	tʰæ
3059	蹤	通	鍾	精	<i>hekou</i>	3	<i>ping</i>	tsiʊŋ	tsiʊŋ	tsioŋ	L	teŋ
3060	跡	梗	昔	精	<i>kaikou</i>	3	<i>ru</i>	tsiek	tsiek	tsiək	H	tɛʌk
3061	進	臻	真	精	<i>kaikou</i>	3	<i>qu</i>	tsin	tsin	tsin	R	tɛin
3062	退	蟹	灰	透	<i>hekou</i>	1	<i>qu</i>	tʰwoi	tʰwoi	tʰoi	R	tʰø
3063	儀	止	支	疑	<i>kaikou</i>	3B	<i>ping</i>	ŋʷiɛ	ŋʷie	ii	L	ui
3064	度	遇	模	定	<i>hekou</i>	1	<i>qu</i>	dʊo	dʊo	to	L	to
3065	拜	蟹	皆	幫	<i>kaikou</i>	2	<i>qu</i>	pʷei	pʷei	pʌi	R	pæ
3066	揖	深	緝	影	<i>kaikou</i>	3A	<i>ru</i>	ʔep	ʔep	ip	H	up
3067	稽	蟹	齊	溪	<i>kaikou</i>	4	<i>shang</i>	kʰei	kʰei	kiəi	R	kje
3068	頓	臻	魂	端	<i>hekou</i>	1	<i>qu</i>	tʊon	tʊon	ton	R	ton
3069	拱	通	鍾	見	<i>hekou</i>	3	<i>shang</i>	kiʊŋ	kiʊŋ	koŋ	R	koŋ
3070	叉	假	麻	初	<i>kaikou</i>	2	<i>ping</i>	tɕʰʷæ	tɕʰʷa	tsʰa	L	tɛʰa
3071	跪	止	支	群	<i>hekou</i>	3B	<i>shang</i>	gʷʷiɛ	gʷʷie	kuəi	R	kwe
3072	踉	止	脂	群	<i>kaikou</i>	3B	<i>shang</i>	gʷi	gʷi	kii	H	ki
3073	行	梗	庚	匣	<i>kaikou</i>	2	<i>ping</i>	ɦʷæŋ	ɦʷaŋ	ɦʌŋ	L	hæŋ
3074	步	遇	模	並	<i>hekou</i>	1	<i>qu</i>	bʊo	bʊo	po	R	po
3075	坐	果	戈	從	<i>hekou</i>	1	<i>shang</i>	dzʷa	dzʷa	tsoa	R	tɛwa
3076	立	深	緝	來	<i>kaikou</i>	3	<i>ru</i>	lip	lip	lip	H	lip

3077	俯	遇	虞	非	hekou	3	shang	piuɔ	piuɔ	pu	R	pu
3078	仰	宕	陽	疑	kaikou	3	shang	ɲianɲ	ɲianɲ	aɲ	R	aɲ
3079	臥	果	戈	疑	hekou	1	qu	ɲ ^w a	ɲ ^w a	oa	R	wa
3080	起	止	之	溪	kaikou	3	shang	k ^h i	k ^h ə	kii	H	ki
3081	踐	山	仙	從	kaikou	3	shang	dziɛn	dzien	ts ^h iən	R	te ^h ʌn
3082	踏	咸	合	透	kaikou	1	ru	t ^h əp	t ^h əp	tap	H	tap
3083	跣	蟹	佳	莊	kaikou	2	ping	tɕ ^ʷ ɛ	tɕ ^ʷ e	ts ^h ai	R	te ^h æ
3084	跑	效	肴	並	kaikou	2	ping	b ^ʷ æu	b ^ʷ au	p ^h o	L	p ^h o
3085	蹲	臻	魂	從	hekou	1	ping	dzuɔn	dzuɔn	tsun	L	teun
3086	踞	遇	魚	見	hekou	3	qu	kiɿ	kio	kə	R	kʌ
3087	跣	山	先	心	kaikou	4	shang	sen	sen	siən	R	sʌn
3088	踣	曾	德	並	kaikou	1	ru	bək	bək	pik	H	puk
3089	蹻	效	宵	溪	kaikou	3A	ping	k ^h iɛu	k ^h iɛu	kio	L	kjo
3090	跬	止	支	溪	hekou	3A	ping	k ^{hw} iɛ	k ^{hw} iɛ	kiu	R	kju
3091	蹶	山	月	見	hekou	3	ru	k ^w iɿt	k ^w iot	kuəl	H	kwʌl
3092	跌	山	屑	定	kaikou	4	ru	det	det	til	H	teil
3093	踴	通	鍾	以	hekou	3	shang	jiuɔɲ	jiuɔɲ	ioɲ	R	joɲ
3094	躍	宕	藥	以	kaikou	3	ru	jiak	jiak	iak	H	jak
3095	跳	效	蕭	定	kaikou	4	ping	deu	deu	tio	L	teo,to
3096	趯	梗	錫	透	kaikou	4	ru	t ^h ek	t ^h ek	t ^h iək	H	te ^h ʌk

3097	窺	止	支	溪	<i>hekou</i>	3A	<i>ping</i>	k ^h wiɛ	k ^h wiɛ	kiu	L	kju
3098	覘	咸	鹽	徹	<i>kaikou</i>	3	<i>qu</i>	t ^h iɛm	t ^h iɛm	tiəm	R	tɛ ^h ɿm
3099	顧	遇	模	見	<i>hekou</i>	1	<i>qu</i>	kɿo	kɿo	ko	R	ko
3100	看	山	寒	溪	<i>kaikou</i>	1	<i>ping</i>	k ^h an	k ^h an	kan	L	kan
3101	見	山	先	見	<i>kaikou</i>	4	<i>qu</i>	ken	ken	kiən	R	kjɿn
3102	視	止	脂	禪	<i>kaikou</i>	3	<i>shang</i>	dzi	dzi	si	R	si
3103	瞻	咸	鹽	章	<i>kaikou</i>	3	<i>ping</i>	tɛiɛm	tɛiɛm	ts ^h iəm	L	tɛ ^h ɿm
3104	覲	梗	錫	定	<i>kaikou</i>	4	<i>ru</i>	dek	dek	tiək	H	tɛɿk
3105	覩	遇	模	端	<i>hekou</i>	1	<i>shang</i>	tɿo	tɿo	to	R	to
3106	覲	流	侯	見	<i>kaikou</i>	1	<i>qu</i>	ku	ku	ku	R	ku
3107	覽	咸	談	來	<i>kaikou</i>	1	<i>shang</i>	lam	lam	lam	R	lam
3108	觀	山	桓	見	<i>hekou</i>	1	<i>ping</i>	k ^w an	k ^w an	koan	L	kwan
3109	瞰	咸	談	溪	<i>kaikou</i>	1	<i>qu</i>	k ^h am	k ^h am	kam	R	kam
3110	眺	效	蕭	透	<i>kaikou</i>	4	<i>qu</i>	t ^h eu	t ^h eu	tio	R	tɛo
3111	瞬	臻	諄	書	<i>hekou</i>	3	<i>qu</i>	ɛ ^w m	ɛ ^w in	siun	R	sun
3112	瞬	梗	青	明	<i>kaikou</i>	4	<i>ping</i>	mɛŋ	mɛŋ	miəŋ	L	mjɿŋ
3113	聾	通	東	來	<i>hekou</i>	1	<i>ping</i>	luŋ	luŋ	loŋ	L	loŋ
3114	聵	蟹	皆	疑	<i>hekou</i>	2	<i>qu</i>	ŋ ^w ɛi	ŋ ^w ɛi	huəi ³⁸³	H	hø

³⁸³Also [koi] (R tone)

3115	聰	通	東	清	hekou	1	ping	ts ^h uŋ	ts ^h uŋ	ts ^h oŋ	L	tɕ ^h oŋ
3116	聃	通	東	曉	hekou	1	ping	huŋ	huŋ	hoŋ	L	hoŋ
3117	聽	梗	青	透	kaikou	4	ping	t ^h eŋ	t ^h eŋ	t ^h iəŋ	L	tɕ ^h ɿəŋ
3118	晤	遇	模	疑	hekou	1	qu	ŋuɔ	ŋuɔ	o	R	o
3119	聞	臻	文	微	hekou	3	ping	miun	miun	mun	L	mun
3120	聆	梗	青	來	kaikou	4	ping	leŋ	leŋ	liəŋ	L	ljɿəŋ
3121	談	咸	談	定	kaikou	1	ping	dam	dam	tam	L	tam
3122	話	蟹	夬	匣	hekou	2	qu	ɸ ^w æi	ɸ ^w ai	hoa	R	hwa
3123	言	山	元	疑	kaikou	3	ping	ŋiɿn	ŋion	ən	L	ɿn
3124	語	遇	魚	疑	hekou	3	qu	ŋiɿ	ŋio	ə	R	ɿ
3125	審	山	仙	見	kaikou	3B	shang	k ^v iɛn	k ^v ien	kən	L	kɿn
3126	吃	臻	迄	見	kaikou	3	ru	kit	kiət	kəl	H	kɿl
3127	訥	臻	真	日	kaikou	3	qu	ŋin	ŋin	zin	R	in
3128	訥	臻	沒	泥	hekou	1	ru	nɯot	nɯot	nul	H	nul
3129	諫	山	刪	見	kaikou	2	qu	k ^v æn	k ^v an	kan	R	kan
3130	諍	梗	耕	莊	kaikou	2	qu	tɕ ^v eŋ	tɕ ^v eŋ	tsɿəŋ	R	tɕæŋ
3131	訐	山	月	見	kaikou	3	ru	kixt	kiot	al	H	al
3132	訕	山	刪	生	kaikou	2	qu	ɕ ^v æn	ɕ ^v an	san	R	san
3133	說	山	薛	書	hekou	3	ru	ɕ ^w iɛt	ɕ ^w iɛt	siəl	H	sɿl
3134	謊	宕	唐	曉	hekou	1	shang	h ^w aŋ	h ^w aŋ	hoəŋ	R	hwaŋ

3135	誘	流	尤	以	<i>kaikou</i>	3	<i>shang</i>	jiu	jəu	iu	R	ju
3136	誅	臻	術	心	<i>hekou</i>	3	<i>ru</i>	s ^w it	s ^w it	t ^h iul	L	tɛ ^h ul
3137	諂	咸	鹽	徹	<i>kaikou</i>	3	<i>shang</i>	t ^h iɛm	t ^h iɛm	t ^h iəm	L	tɛ ^h ɐm
3138	諛	遇	虞	以	<i>hekou</i>	3	<i>ping</i>	jiɤɔ	jiɤo	iu	R	ju
3139	佞	梗	青	泥	<i>kaikou</i>	4	<i>qu</i>	neŋ	neŋ	niəŋ	R	njɐŋ
3140	辯	山	仙	並	<i>kaikou</i>	3B	<i>shang</i>	b ^ɥ iɛn	b ^ɥ iɛn	piən	R	pjɐn
3141	是	止	支	禪	<i>kaikou</i>	3	<i>shang</i>	dziɛ	dzie	si	R	si
3142	非	止	微	非	<i>kaikou</i>	3	<i>ping</i>	pɿi	pəi	pi	L	pi
3143	枉	宕	陽	影	<i>hekou</i>	3	<i>shang</i>	ʔ ^w iaŋ	ʔ ^w iaŋ	oaŋ	R	waŋ
3144	直	曾	職	澄	<i>kaikou</i>	3	<i>ru</i>	dʒik	dʒək	tik	H	tɛik
3145	謗	宕	唐	幫	<i>kaikou</i>	1	<i>qu</i>	paŋ	paŋ	paŋ	H	paŋ
3146	讎	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	H	tok
3147	毀	止	支	曉	<i>hekou</i>	3B	<i>shang</i>	h ^w ɥiɛ	h ^w ɥiɛ	huəi	R	hwe
3148	譽	遇	魚	以	<i>hekou</i>	3	<i>qu</i>	jiɾ	jio	iəi	R	je
3149	譏	止	微	見	<i>kaikou</i>	3	<i>ping</i>	kɿi	kəi	kii	L	ki
3150	誚	效	宵	從	<i>kaikou</i>	3	<i>qu</i>	dziɛu	dzieu	ts ^h io	H	tɛ ^h o
3151	譴	山	仙	溪	<i>kaikou</i>	3A	<i>qu</i>	k ^h iɛn	k ^h iɛn	kiən	R	kjɐn
3152	讀	梗	麥	莊	<i>kaikou</i>	2	<i>ru</i>	tɕ ^ɥ ɛk	tɕ ^ɥ ɛk	ts ^h ɐik	H	tɛ ^h æk
3153	讒	咸	咸	崇	<i>kaikou</i>	2	<i>ping</i>	dzɿ ^ɥ ɛm	dzɿ ^ɥ ɛm	ts ^h am	L	tɛ ^h am
3154	譖	深	侵	莊	<i>kaikou</i>	3	<i>qu</i>	tɕim	tɕim	ts ^h ɐm	R	tɛ ^h am

3155	訴	遇	模	心	<i>hekou</i>	1	<i>qu</i>	sɿo	sɿo	so	R	so
3156	告	效	豪	見	<i>kaikou</i>	1	<i>qu</i>	kau	kau	ko	H	ko
3157	賊	宕	唐	精	<i>kaikou</i>	1	<i>ping</i>	tsaŋ	tsaŋ	tsaŋ	L	teŋ
3158	證	曾	蒸	章	<i>kaikou</i>	3	<i>qu</i>	teiŋ	teiəŋ	tsiŋ	R	teuŋ
3159	誣	遇	虞	微	<i>hekou</i>	3	<i>ping</i>	miɿo	miɿo	mu	L	mu
3160	覈	梗	麥	匣	<i>kaikou</i>	2	<i>ru</i>	fi ^ʷ ɛk	fi ^ʷ ɛk	hɿk	L	hæk
3161	鯨	梗	庚	群	<i>kaikou</i>	3	<i>ping</i>	giæŋ	gian	kiəŋ	L	kjɿŋ
3162	劓	止	脂	疑	<i>kaikou</i>	3B	<i>qu</i>	ŋ ^ʷ i	ŋ ^ʷ i	ii	R	ui
3163	刖	止	微	奉	<i>kaikou</i>	3	<i>qu</i>	bii	biəi	pi	R	pi
3164	刖	山	月	疑	<i>hekou</i>	3	<i>ru</i>	ŋ ^w iɿt	ŋ ^w iot	uəl	H	wɿl
3165	罪	蟹	灰	從	<i>hekou</i>	1	<i>shang</i>	dz ^w oi	dz ^w oi	tsoi	R	te ∅
3166	辜	遇	模	見	<i>hekou</i>	1	<i>ping</i>	kɿo	kɿo	ko	L	ko
3167	罰	山	月	奉	<i>hekou</i>	3	<i>ru</i>	b ^w iɿt	b ^w iot	pəl	H	pɿl
3168	謫	梗	麥	知	<i>kaikou</i>	2	<i>ru</i>	t ^ʷ ɛk	t ^ʷ ɛk	tiək	L	teɿk
3169	打	假	麻	知	<i>kaikou</i>	2	<i>shang</i>	t ^ʷ æ	t ^ʷ a	t ^h a	R	t ^h a
3170	拷	效	豪	溪	<i>kaikou</i>	1	<i>shang</i>	k ^h au	k ^h au	ko	H	ko
3171	捶	止	支	章	<i>hekou</i>	3	<i>ping</i>	te ^w iɛ	te ^w ie	ts ^h iuiəi	R	te ^h u
3172	撻	山	曷	透	<i>kaikou</i>	1	<i>ru</i>	t ^h an	t ^h an	tal	H	tal
3173	趕	山	寒	見	<i>kaikou</i>	1	<i>shang</i>	kan	kan	han	H	han
3174	逐	通	屋	澄	<i>hekou</i>	3	<i>ru</i>	ɕiuk	ɕiuk	t ^h iuk	H	te ^h uk

3175	黜	臻	術	徹	hekou	3	ru	tʰwɪt	tʰwɪt	tʰiul	H	tɕʰul
3176	斥	梗	昔	昌	kaikou	3	ru	tɕʰiɛk	tɕʰiɛk	tsʰiək	H	tɕʰʌk
3177	奸	山	寒	見	kaikou	1	ping	kan	kan	kan	L	kan
3178	詐	假	麻	莊	kaikou	2	qu	tɕʰæ	tɕʰa	sa	R	sa
3179	狡	效	肴	見	kaikou	2	shang	kʰæu	kʰau	kio	R	kjo
3180	猾	山	黠	匣	hekou	2	ru	ɦwɛt	ɦwɛt	hoal	R	hwal
3181	慳	山	山	溪	kaikou	2	ping	kʰɛn	kʰɛn	kan	L	kan
3182	恪	臻	真	來	kaikou	3	qu	lin	lin	lin	R	lin
3183	斬	臻	殷	見	kaikou	3	qu	kin	kiən	kin	L	kuən
3184	嗇	曾	職	生	kaikou	3	ru	ɕik	ɕiək	sɿik	H	sæk
3185	懦	果	戈	泥	hekou	1	qu	nʷa	nʷa	na	R	na
3186	弱	宕	藥	日	kaikou	3	ru	ɲiak	ɲiak	iak	H	jak
3187	迷	蟹	齊	明	kaikou	4	ping	mei	mei	mi	L	mi
3188	劣	山	薛	來	hekou	3	ru	lʷiɛt	lʷiɛt	liəl	H	ljəl
3189	饗	效	豪	透	kaikou	1	ping	tʰau	tʰau	to	L	to
3190	饗	山	屑	透	kaikou	4	ru	tʰet	tʰet	tʰiəl	H	tɕʰʌl
3191	貪	咸	覃	透	kaikou	1	ping	tʰəm	tʰəm	tʰam	L	tʰam
3192	婪	咸	覃	來	kaikou	1	ping	ləm	ləm	lam	L	lam
3193	嬾	山	寒	來	kaikou	1	shang	lan	lan	lan	R	lan
3194	惰	果	戈	定	hekou	1	shang	dʷa	dʷa	tʰa	R	tʰa

3195	懈	蟹	佳	見	<i>kaikou</i>	2	<i>qu</i>	k ^ʷ ɛ	k ^ʷ e	hɿi	R	hæ
3196	怠	蟹	哈	定	<i>kaikou</i>	1	<i>shang</i>	dəi	dəi	t ^h ɿi	H	t ^h æ
3197	愚	遇	虞	疑	<i>hekou</i>	3	<i>ping</i>	ŋiɿo	ŋiɿo	u	L	u
3198	駮	蟹	皆	疑	<i>kaikou</i>	2	<i>shang</i>	ŋ ^ʷ ei	ŋ ^ʷ ei	ai	R	æ
3199	癡	止	之	徹	<i>kaikou</i>	3	<i>ping</i>	t ^h i	t ^h ə	t ^h i	L	tɛ ^h i
3200	慙	咸	談	曉	<i>kaikou</i>	1	<i>ping</i>	ham	ham	ham	L	ham
3201	好	效	豪	曉	<i>kaikou</i>	1	<i>shang</i>	hau	hau	ho	H	ho
3202	歹	蟹	哈	端	<i>kaikou</i>	1	<i>shang</i>	təi	təi	tai	R	tæ
3203	善	山	仙	禪	<i>kaikou</i>	3	<i>shang</i>	dziɛn	dzien	siɛn	R	sɿn
3204	惡	宕	鐸	影	<i>kaikou</i>	1	<i>ru</i>	ʔak	ʔak	ak	H	ak
3205	能	曾	登	泥	<i>kaikou</i>	1	<i>ping</i>	nəŋ	nəŋ	niŋ	L	nuŋ
3206	否	流	尤	非	<i>kaikou</i>	3	<i>shang</i>	piu	pəu	pu	R	pu
3207	淑	通	屋	禪	<i>hekou</i>	3	<i>ru</i>	dziuk	dziuk	siuk	H	suk
3208	慝	曾	德	透	<i>kaikou</i>	1	<i>ru</i>	t ^h ək	t ^h ək	t ^h ik	H	t ^h uk
3209	德	曾	德	端	<i>kaikou</i>	1	<i>ru</i>	tək	tək	tək	H	tək
3210	行	梗	庚	匣	<i>kaikou</i>	2	<i>ping</i>	ɦ ^ʷ æŋ	ɦ ^ʷ aŋ	hɿŋ	R	hæŋ
3211	學	江	覺	匣	<i>kaikou</i>	2	<i>ru</i>	ɦ ^ʷ ək	ɦ ^ʷ ok	hɿk	R	hak
3212	業	咸	業	疑	<i>kaikou</i>	3	<i>ru</i>	ŋiap	ŋiap	əp	H	ɿp
3213	才	蟹	哈	從	<i>kaikou</i>	1	<i>ping</i>	dzəi	dzəi	tsɿi	L	tɛæ
3214	術	臻	術	船	<i>hekou</i>	3	<i>ru</i>	z ^ʷ it	z ^ʷ it	siul	H	sul

3215	技	止	支	群	<i>kaikou</i>	3B	<i>shang</i>	g ^y iɛ	g ^y ie	ki	R	ki
3216	藝	蟹	祭	疑	<i>kaikou</i>	3A	<i>qu</i>	ŋiei	ŋiei	iəi	H	je
3217	職	曾	職	章	<i>kaikou</i>	3	<i>ru</i>	tɛik	tɛiək	tsik	H	tɛik
3218	任	深	侵	日	<i>kaikou</i>	3	<i>qu</i>	ŋim	ŋim	zim	R	im
3219	資	止	脂	精	<i>kaikou</i>	3	<i>ping</i>	tsi	tsi	tsʌ	L	tea
3220	級	深	緝	見	<i>kaikou</i>	3B	<i>ru</i>	k ^y ip	k ^y ip	kip	H	kuɸ
3221	功	通	東	見	<i>hekou</i>	1	<i>ping</i>	kuŋ	kuŋ	koŋ	L	koŋ
3222	勛	梗	錫	精	<i>kaikou</i>	4	<i>ru</i>	tsek	tsek	tsiək	L	tɛʌk
3223	勳	臻	文	曉	<i>hekou</i>	3	<i>ping</i>	hiun	hiun	hun	L	hun
3224	勳	蟹	祭	以	<i>kaikou</i>	3	<i>qu</i>	jiei	jiei	iəi	L	je
3225	刑	梗	青	匣	<i>kaikou</i>	4	<i>ping</i>	fiɛŋ	fiɛŋ	hiəŋ	L	hjaŋ
3226	政	梗	清	章	<i>kaikou</i>	3	<i>qu</i>	tɛiɛŋ	tɛiɛŋ	tsiəŋ	L	tɛʌŋ
3227	事	止	之	崇	<i>kaikou</i>	3	<i>qu</i>	dzɿ	dzɿ	sʌ	R	sa
3228	務	遇	虞	微	<i>hekou</i>	3	<i>qu</i>	miɸo	miɸo	mu	R	mu
3229	嚴	咸	嚴	疑	<i>kaikou</i>	3	<i>ping</i>	ŋiam	ŋiam	əm	L	ʌm
3230	威	止	微	影	<i>hekou</i>	3	<i>ping</i>	ʔii	ʔəi	ui	L	y
3231	恩	臻	痕	影	<i>kaikou</i>	1	<i>ping</i>	ʔən	ʔən	in	L	un
3232	惠	蟹	齊	匣	<i>hekou</i>	4	<i>qu</i>	fi ^w ei	fi ^w ei	hiəi	R	hje
3233	統	通	冬	透	<i>hekou</i>	1	<i>qu</i>	tʰɸoŋ	tʰɸoŋ	tʰoŋ	R	tʰoŋ
3234	御	遇	魚	疑	<i>hekou</i>	3	<i>qu</i>	ŋiɿ	ŋio	ə	H	ʌ

3235	攝	咸	葉	書	<i>kaikou</i>	3	<i>ru</i>	ɕʰiɛp	ɕʰiɛp	siəp	H	sap
3236	理	止	之	來	<i>kaikou</i>	3	<i>shang</i>	li	lə	li	R	li
3237	撫	遇	虞	敷	<i>hekou</i>	3	<i>shang</i>	pʰiɤʔ	pʰiɤʔ	mu	R	mu
3238	恤	臻	術	心	<i>hekou</i>	3	<i>ru</i>	sʷit	sʷit	hiul	H	hjul
3239	賑	臻	真	章	<i>kaikou</i>	3	<i>qu</i>	tein	tein	tsin	R	tein
3240	濟	蟹	齊	精	<i>kaikou</i>	4	<i>shang</i>	tsei	tsei	tsiəi ³⁸⁴	R	tce
3241	講	江	江	見	<i>kaikou</i>	2	<i>shang</i>	kɔŋ	kɔŋ	kaŋ	R	kaŋ
3242	誨	蟹	灰	曉	<i>hekou</i>	1	<i>qu</i>	hɤoi	hɤoi	hoi	R	hø
3243	教	效	肴	見	<i>kaikou</i>	2	<i>qu</i>	kʰæu	kʰau	kio	R	kjo
3244	訓	臻	文	曉	<i>hekou</i>	3	<i>qu</i>	hiun	hiun	hun	R	hun
3245	讀	通	屋	定	<i>hekou</i>	1	<i>ru</i>	duk	duk	tok	H	tok
3246	習	深	緝	邪	<i>kaikou</i>	3	<i>ru</i>	zip	zip	sip	H	suip
3247	諷	通	東	非	<i>hekou</i>	3	<i>qu</i>	piuŋ	piuŋ	pʰuŋ	R	pʰuŋ
3248	誦	通	鍾	邪	<i>hekou</i>	3	<i>qu</i>	ziɤŋ	ziɤŋ	sioŋ	R	soŋ
3249	盟	梗	庚	明	<i>kaikou</i>	3	<i>ping</i>	miæŋ	miaŋ	mɿiŋ	H	mæŋ
3250	誓	蟹	祭	禪	<i>kaikou</i>	3	<i>qu</i>	dziɛi	dziei	siəi	R	se
3251	襍	咸	鹽	影	<i>kaikou</i>	3A	<i>shang</i>	ʔiɛm	ʔiem	iəɱ	R	jɿɱ
3252	襍	宕	陽	日	<i>kaikou</i>	3	<i>ping</i>	ŋiaŋ	ŋiaŋ	iaŋ	L	jaŋ

³⁸⁴ The meaning for this reading is "to lead". It is [tsiəi](R tone) (MC: 蟹齊精開 4 去)when the meaning is "to cross".

3253	祈	止	微	群	<i>kaikou</i>	3	<i>ping</i>	gii	gəi	kii	L	ki
3254	禱	效	豪	端	<i>kaikou</i>	1	<i>shang</i>	tau	tau	to	H	to
3255	讚	山	寒	精	<i>kaikou</i>	1	<i>qu</i>	tsan	tsan	ts ^h an	R	te ^h an
3256	頌	通	鍾	邪	<i>hekou</i>	3	<i>qu</i>	ziɿɔŋ	ziɿɔŋ	sioŋ	R	soŋ
3257	謳	流	侯	影	<i>kaikou</i>	1	<i>ping</i>	ʔu	ʔu	ku	L	ku
3258	謠	效	宵	以	<i>kaikou</i>	3	<i>ping</i>	jiɛu	jieu	io	L	jo
3259	吟	深	侵	疑	<i>kaikou</i>	3B	<i>ping</i>	ŋ ^ʷ im	ŋ ^ʷ im	im	L	um
3260	嘯	效	蕭	心	<i>kaikou</i>	4	<i>qu</i>	seu	seu	sio	R	so
3261	問	臻	文	微	<i>hekou</i>	3	<i>qu</i>	miun	miun	mun	R	mun
3262	訊	臻	真	心	<i>kaikou</i>	3	<i>qu</i>	sin	sin	sin	R	sin
3263	詞	止	之	邪	<i>kaikou</i>	3	<i>ping</i>	zi	zə	sɿ	L	sa
3264	訟	通	鍾	邪	<i>hekou</i>	3	<i>qu</i>	ziɿɔŋ	ziɿɔŋ	sioŋ	H	soŋ
3265	嬖	蟹	齊	幫	<i>kaikou</i>	4	<i>qu</i>	pei	pei	p ^h iəi	R	p ^h je
3266	寵	通	鍾	徹	<i>hekou</i>	3	<i>shang</i>	t ^h iɿɔŋ	t ^h iɿɔŋ	t ^h ioŋ	R	te ^h oŋ
3267	姬	止	之	見	<i>kaikou</i>	3	<i>ping</i>	ki	kə	hii	L	hwi
3268	姜	宕	陽	見	<i>kaikou</i>	3	<i>ping</i>	kiaŋ	kiaŋ	kaŋ	L	kaŋ
3269	偎	蟹	灰	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w oi	ʔ ^w oi	oi	L	ø
3270	愛	蟹	哈	影	<i>kaikou</i>	1	<i>shang</i>	ʔəi	ʔəi	ɿi	R	æ
3271	矜	曾	蒸	見	<i>kaikou</i>	3	<i>ping</i>	kiŋ	kiəŋ	kiŋ	L	kuŋ
3272	憐	山	先	來	<i>kaikou</i>	4	<i>ping</i>	len	len	liən	L	ljɿn

3273	皺	臻	諄	清	hekou	3	ping	ts ^{hw} in	ts ^{hw} in	tsiun	L	tejun
3274	皺	流	尤	莊	kaikou	3	qu	tɕiu	tɕəu	ts ^h u	L	te ^h u
3275	蚩	止	之	昌	kaikou	3	ping	te ^h i	te ^h ə	ts ^h i	H	te ^h i
3276	醜	流	尤	昌	kaikou	3	shang	te ^h iu	te ^h əu	ts ^h iui	R	te ^h u
3277	丰	通	鍾	敷	hekou	3	ping	p ^h iɿŋ	p ^h iɿŋ	poŋ	L	poŋ
3278	艷	咸	鹽	以	kaikou	3	qu	jiem	jiem	iəm	R	jɿm
3279	嬌	效	宵	見	kaikou	3B	ping	k ^ʷ iəu	k ^ʷ iəu	kio	H	kjo
3280	妍	山	先	疑	kaikou	4	ping	ŋen	ŋen	iən	L	jɿn
3281	伉	宕	唐	溪	kaikou	1	qu	k ^h aŋ	k ^h aŋ	haŋ	R	haŋ
3282	儷	蟹	齊	來	kaikou	4	qu	lei	lei	liəi	H	lje
3283	雙	江	江	生	kaikou	2	ping	ɕoŋ	ɕoŋ	soaŋ	L	s [*] aŋ
3284	對	蟹	灰	端	hekou	1	qu	t ^ʷ oi	t ^ʷ oi	tai	R	tæ
3285	孖	山	薛	見	kaikou	3A	ru	kiɛn	kien	hiəl	H	hjɿl
3286	隻	梗	昔	章	kaikou	3	ru	teiɛk	teiɛk	ts ^h iək	H	te ^h ɿk
3287	孤	遇	模	見	hekou	1	ping	kɿo	kɿo	ko	L	ko
3288	獨	通	屋	定	hekou	1	ru	duk	duk	tok	H	tok
3289	一	臻	質	影	kaikou	3A	ru	ʔit	ʔit	il	H	il
3290	壹	臻	質	影	kaikou	3A	ru	ʔit	ʔit	il	H	il
3291	二	止	脂	日	kaikou	3	qu	ɿ	ɿ	zi	L	i
3292	貳	止	脂	日	kaikou	3	qu	ɿ	ɿ	zi	R	i

3293	三	咸	談	心	<i>kaikou</i>	1	<i>ping</i>	sam	sam	sam	L	sam
3294	四	止	脂	心	<i>kaikou</i>	3	<i>qu</i>	si	si	sΛ	R	sa
3295	五	遇	模	疑	<i>hekou</i>	1	<i>shang</i>	ŋʊo	ŋʊo	o	R	o
3296	六	通	屋	來	<i>hekou</i>	3	<i>ru</i>	liuk	liuk	liuk	H	ljuk
3297	七	臻	質	清	<i>kaikou</i>	3	<i>ru</i>	ts ^h it	ts ^h it	ts ^h il	R	tɕ ^h il
3298	八	山	黠	幫	<i>kaikou</i>	2	<i>ru</i>	p ^ʷ et	p ^ʷ et	p ^h al	H	p ^h al
3299	九	流	尤	見	<i>kaikou</i>	3	<i>shang</i>	kiu	kəu	ku	R	ku
3300	十	深	緝	禪	<i>kaikou</i>	3	<i>ru</i>	dzip	dzip	sip	R	sip
3301	百	梗	陌	幫	<i>kaikou</i>	2	<i>ru</i>	p ^ʷ æk	p ^ʷ ak	pΛik	H	pæk
3302	千	山	先	清	<i>kaikou</i>	4	<i>ping</i>	ts ^h en	ts ^h en	ts ^h iən	L	tɕ ^h Λn
3303	萬	山	元	微	<i>hekou</i>	3	<i>qu</i>	m ^w iɤn	m ^w ion	man	R	man
3304	億	曾	職	影	<i>kaikou</i>	3	<i>ru</i>	ʔik	ʔiək	ək	H	Λk
3305	分	臻	文	非	<i>hekou</i>	3	<i>ping</i>	piun	piun	pun	L	pun
3306	兩	宕	陽	來	<i>kaikou</i>	3	<i>shang</i>	liaŋ	liaŋ	liaŋ	R	ljaŋ
3307	寸	臻	魂	清	<i>hekou</i>	1	<i>qu</i>	ts ^h uon	ts ^h uon	ts ^h on	R	tɕ ^h on
3308	斤	臻	殷	見	<i>kaikou</i>	3	<i>ping</i>	kin	kiən	kin	L	kuən
3309	担	山	寒	端	<i>kaikou</i>	1	<i>shang</i>	tan	tan	tan	R	tan
3310	托	宕	鐸	透	<i>kaikou</i>	1	<i>ru</i>	t ^h ak	t ^h ak	t ^h ak	H	t ^h ak
3311	咫	止	支	章	<i>kaikou</i>	3	<i>shang</i>	tɕiɛ	tɕiɛ	tsi	R	tɕi
3312	坼	梗	陌	徹	<i>kaikou</i>	2	<i>ru</i>	t ^h ʷæk	t ^h ʷak	t ^h Λik	L	t ^h ak

3313	左	果	歌	精	<i>kaikou</i>	1	<i>shang</i>	tsa	tsa	tsoa	R	tɛwa
3314	右	流	尤	云	<i>kaikou</i>	3	<i>shang</i>	fiu	fəu	u	R	u
3315	前	山	先	從	<i>kaikou</i>	4	<i>ping</i>	dzen	dzen	tsiən	L	tɛʌn
3316	後	流	侯	匣	<i>kaikou</i>	1	<i>shang</i>	fu	fu	hu	R	hu
3317	遐	假	麻	匣	<i>kaikou</i>	2	<i>ping</i>	fʷæ	fʷa	ha	L	ha
3318	遠	山	元	云	<i>hekou</i>	3	<i>shang</i>	fʷiɤn	fʷion	uən	R	wʌn
3319	近	臻	殷	群	<i>kaikou</i>	3	<i>shang</i>	gin	giən	kin	R	kun
3320	邇	止	支	日	<i>kaikou</i>	3	<i>shang</i>	ɲiɛ	ɲie	zi	R	i
3321	上	宕	陽	禪	<i>kaikou</i>	3	<i>qu</i>	dziəŋ	dziəŋ	siaŋ	R	saŋ
3322	下	假	麻	匣	<i>kaikou</i>	2	<i>shang</i>	fʷæ	fʷa	ha	R	ha
3323	內	蟹	灰	泥	<i>hekou</i>	1	<i>qu</i>	nʷoi	nʷoi	nʌi	H	næ
3324	外	蟹	泰	疑	<i>kaikou</i>	1	<i>qu</i>	ŋai	ŋai	oi	R	ø
3325	中	通	東	知	<i>hekou</i>	3	<i>ping</i>	tʃiŋ	tʃiŋ	tiŋ	L	tɛuŋ
3326	間	山	山	見	<i>kaikou</i>	2	<i>ping</i>	kʷɛn	kʷɛn	kan	L	kan
3327	衷	通	東	知	<i>hekou</i>	3	<i>ping</i>	tʃiŋ	tʃiŋ	tʰiŋ	L	tɛʰuŋ
3328	裏	止	之	來	<i>kaikou</i>	3	<i>shang</i>	li	lə	li	R	li
3329	煙	山	先	影	<i>kaikou</i>	4	<i>ping</i>	ʔen	ʔen	iən	L	jʌn
3330	火	果	戈	曉	<i>hekou</i>	1	<i>shang</i>	hʷa	hʷa	hoa	R	hwa
3331	焚	臻	文	奉	<i>hekou</i>	3	<i>ping</i>	biun	biun	pun	H	pun
3332	燒	效	宵	書	<i>kaikou</i>	3	<i>ping</i>	ɕieu	ɕieu	sio	L	so

3333	燄	咸	鹽	以	<i>kaikou</i>	3	<i>shang</i>	jiem	jiem	iəm	R	jəm
3334	炸	假	麻	莊	<i>kaikou</i>	2	<i>qu</i>	tɕʰæ	tɕʰa	tsa	R	tɕa
3333	塘	宕	唐	定	<i>kaikou</i>	1	<i>ping</i>	daŋ	daŋ	taŋ	L	taŋ
3336	煨	蟹	灰	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w oi	ʔ ^w oi	oi	L	ø
3337	燬	止	支	曉	<i>hekou</i>	3B	<i>shang</i>	h ^w iɛ	h ^w iɛ	huəi	R	hwe
3338	藝	山	薛	日	<i>hekou</i>	3	<i>ru</i>	ɲ ^w iɛt	ɲ ^w iɛt	siəl	L	səl
3339	燎	效	宵	來	<i>kaikou</i>	3	<i>shang</i>	liɛu	lieu	lio	R	ljo
3340	燹	山	仙	心	<i>kaikou</i>	3	<i>shang</i>	siɛn	sien	siən	R	sən
3341	燼	臻	真	邪	<i>kaikou</i>	3	<i>qu</i>	zin	zin	sin	R	sin
3342	炷	遇	虞	章	<i>hekou</i>	3	<i>qu</i>	teiɥo	teiɥo	tsu	R	tɕu
3343	灰	蟹	灰	曉	<i>hekou</i>	1	<i>ping</i>	hɥoi	hɥoi	hoi	L	hø
3344	烔	蟹	哈	定	<i>kaikou</i>	1	<i>ping</i>	dəi	dəi	tʰɿ	L	tʰæ
3345	泽	江	江	見	<i>kaikou</i>	2	<i>qu</i>	kɔŋ	koŋ	kaŋ	R	kaŋ
3346	水	止	脂	書	<i>hekou</i>	3	<i>shang</i>	ɕ ^w i	ɕ ^w i	siu	H	su
3347	瀾	止	支	明	<i>kaikou</i>	3A	<i>ping</i>	miɛ	mie	mi	R	mi
3348	漫	山	桓	明	<i>hekou</i>	1	<i>qu</i>	m ^w an	m ^w an	man	R	man
3349	漲	宕	陽	知	<i>kaikou</i>	3	<i>qu</i>	tʃaŋ	tʃaŋ	tʰiaŋ	R	tɕʰaŋ
3350	濫	咸	談	來	<i>kaikou</i>	1	<i>qu</i>	lam	lam	lam	R	lam
3351	淹	咸	鹽	影	<i>kaikou</i>	3B	<i>ping</i>	ʔ ^y iɛm	ʔ ^y iɛm	əm	R	ɿm
3352	溺	梗	錫	泥	<i>kaikou</i>	4	<i>ru</i>	nek	nek	nik	H	nik

3353	渾	臻	魂	匣	<i>hekou</i>	1	<i>shang</i>	h _ɥ on	h _ɥ on	hon	R	hon
3354	淪	臻	諄	來	<i>hekou</i>	3	<i>ping</i>	l ^w ɪn	l ^w in	liun	L	ljun
3355	汪	宕	唐	影	<i>hekou</i>	1	<i>ping</i>	ʔ ^w aŋ	ʔ ^w aŋ	oaŋ	L	waŋ
3356	濊	蟹	廢	影	<i>hekou</i>	3	<i>qu</i>	ʔ ^w iai	ʔ ^w iai	iəi	R	je
3357	泯	臻	真	明	<i>kaikou</i>	3A	<i>shang</i>	min	min	min	R	min
3358	滅	山	薛	明	<i>kaikou</i>	3A	<i>ru</i>	miɛn	mien	miəl	R	mjɿl
3359	終	通	東	章	<i>hekou</i>	3	<i>ping</i>	teiun̄	teiun̄	tsion̄	R	teon̄
3360	極	曾	職	群	<i>kaikou</i>	3	<i>ru</i>	gik	giək	kik	H	kwk