



10.5281/zenodo.220904

# ASTRAL SCIENCE OF THE EAST SYRIAC CHRISTIANS IN CHINA DURING THE LATE FIRST MILLENNIUM AD

**Bill M. Mak**

*Institute for Research in Humanities / Hakubi Center of Advanced Research, Kyoto University*

Received: 04/01/2016

Accepted: 12/02/2016

Corresponding author: Bill M. Mak ([mak@zinbun.kyoto-u.ac.jp](mailto:mak@zinbun.kyoto-u.ac.jp))

---

## ABSTRACT

This paper examines the astral knowledge of the East Syriac Christians in China (formerly known as Nestorians) and its development from the Tang Dynasty onward. In particular, I will focus on the process of transmission of Hellenistic astral science from the Near East via the Silk Road and Central Asia to East Asia, as well as the role of the Christians of the Church of the East, including most notably the Sino-Persian *Li* family, in disseminating foreign astronomical knowledge throughout China during the late first millennium AD. Among the most important sources is a text titled *Yusi jing*, translated from an unknown language into Chinese some time after the seventh century AD. An examination of its content reveals a striking resemblance to Dorotheus' *Carmen Astrologicum* (first century AD). Subsequently, the text went through a long course of transformation and sinicisation, and had wide influence to the evolution of Chinese astrological and mantic science (fate calculation) through the second millennium AD. As it will be demonstrated, the eastward transmission of Greco-Persian astral science was a part of the greater picture of the circulation of knowledge in Eurasia during the first millennium AD.

---

**KEYWORDS:** East Syriac Christians, Nestorians, Hellenistic astral science, Eurasian cultural exchange, Chinese astronomy, Chinese astrology

---

## 1. EAST SYRIAC CHRISTIANS IN CHINA AND THEIR SCIENTIFIC ACTIVITIES

When compared with the Indian and Central Asian Buddhists who had made contacts with the Chinese as early as the first century AD, the Christians were latecomers, arriving only centuries later and did not appear to have made much impact to the Chinese intellectual culture until Matteo Ricci and other learned Jesuit missionaries arrived in China from the sixteenth century. There is, however, a considerable body of textual and epigraphical materials attesting to the presence and activities of the early Christians in China, most notably from the Syriac Church of the East who flourished during the early part of Tang Dynasty from the seventh up to the middle of the ninth century (Baum and Winkler, 2000: 46-51). Scholars have so far examined different aspects of these early Christians in China and their activities, such as their teachings, doctrinal sources, interaction with Buddhism and so on. In this paper, my focus turns to their scientific knowledge and their role as mediator of knowledge between the East and the West. Like other groups of foreigners preceding them such as the Indian and Central Asian Buddhists, as well as later the Arabs and the Jesuits, what characterises the foreigners in China has often been their foreign scientific knowledge, in particular astronomy, which is highly sought after by the Chinese for a variety of reasons we shall explore.



Figure 1. a) Front portion of the Xi'an stele (left); b) Left side of the stele where the names Wenzhen and Lūqā are found (right)

To begin, let us examine once again the much discussed Xi'an stele *Daqin jingjiao liuxing zhongguo beisong* dated 781 AD. It consists of 1756 Chinese characters and some 70 Syriac words, ascribed to the monk Jingjing (fl. late eighth century), identified in Syriac as "Adam, Priest and Chorepiscopus, and Pash' of Chinestan" (Horne, 1917: 381-392, Saeki, 1951: 34).<sup>1</sup> The text describes the early stage of Christian missionary activities up to the late eighth century, starting likely from 635 AD when the monk Aluoben (Alopen), identified as "Abraham" (Saeki, 1951: 85; Pelliot 1996: 255), arrived in China from Syria (*daqin*). They called their religion "Luminous teaching" (*Jingjiao*) and the members identified themselves ethnically as Persian (*bosi*). The stele marks a high point of Syriac Christianity in China before it was practically decimated under the rule of Emperor Wu in 845 AD. What interests us here is the way the date is described on the stele. After the standard Chinese formulation of the regnal year, followed by the Jupiter cycle, lunar month and day, the date of the stele (February 4, 781 AD) was designated as *da yaosenwen ri*, or the "Great Day of \*yewH-srim-mjun," corresponding to the Middle Persian word for Sunday, *ēw-šambat*, which literally means "[day] one [of the] week" (Chavanne & Pelliot, 1913: 163-165, 174-176; Pelliot, 1996: 308, fn. 281). The choice is of no surprise given the importance of Sunday, the first day of the week designated as the Lord's Day for Christian worship. In the Syriac portion of the stele, the inscription finishes with the date: *basnath alep w'thes'in w'tharthen d'laounaie*, "the year of the Greeks one thousand and ninety-two," that is, in Seleucid era (Saeki, 1951: 69). The use of the Greek year connects most likely to an astronomical and astral system of ultimately Greek origin used by the Syriac Christians. This connection is corroborated by the evidence of secular Greek learning which began to infiltrate Syriac Christianity from the fifth century in the Near East (Takahashi 2010: 19; 2015: 68-71). The multicultural heritage of the Perso-Syriac Christians in China is thus reflected in the date of the Xi'an stele, with Chinese, Persian, Greek, and Syriac elements juxtaposed against each other.

It is of interest that for the Middle Persian name of Sunday, an almost identical Chinese expression *yaosenwu* (MC. \*yewH-srim-mjut) is noted as the "Persian Sunday" in a multilingual list of the seven planetary weekdays in the second fascicle of Amoghavajra's *Xiuyao jing* (*Taishō* 1299), a Buddhist astral manual transcribed by Amoghavajra's Chinese disciple Shi Yao in 759 AD (Yano, 1986: 91; Mak, 2014: 118-120). In another Buddhist record, the same

<sup>1</sup> For complete transcription and translation, see Saeki, 1951, 53-77, [R] 1-12; Pelliot 1996: 173-180.

*Jingjing* (Adam), author of the inscription of the Xi'an stele, was mentioned as a co-translator of a Buddhist text written in a Central Asian language or script (Takakusu, 1896: 39-40). Given Buddhism's far more established position in China, one could well imagine that the Christians were less of a rival, but rather fellow foreigners who were eager to emulate the success of the Buddhists. Indeed, the Syriac Christians adopted the Chinese Buddhist language and the members of the Church even labelled themselves as *seng*, a Chinese word derived from the Sanskrit *saṃgha* originally to refer to the Buddhist monastics. As we shall see, these multilingual, foreign religious elites appear to have formed a kind of expatriate intellectual network, which facilitated the dissemination of foreign astral knowledge in the Far East.

## 2. ASTRAL SCIENCE OF THE EAST SYRIAC CHRISTIANS IN CHINA

### 2.1. *Li Su the Persian astronomer in the Tang Bureau of Astronomy*

From the extant Chinese sources, we know that Persian activities including instrument-making were noted as early as the beginning of the eighth century in Guangzhou, the southern gateway for foreigners arriving in China through the maritime silk route. In 714 AD, the local authority in Guangzhou was alarmed by the "strange instruments" the Persian monk Jilie (identified as Gabriel in the Xi'an stele) and others built and put their activities to a halt (Saeki, 1937: 94).

In 1980, a double-tombstone was discovered in Xi'an, providing us important clues with regards to the astronomical activities of the East-Syrian Christians in China. The inscription on the tombstone gives the biographies of the Persian astronomer, Li Su (743 - 817 AD), known also as Wenzhen, and his wife Bei shi (Chen GY, 1981: 25-31; Rong, 2001 [1998]: 239 ff). The biographical account informs us that the Li family is of Persian origin and had settled for generations in Guangzhou. Some time during the years of *Dali* (766 - 779 AD), Li was recruited as an officer to the Bureau of Astronomy (*Sitiantai*) and relocated to the capital Chang'an. He succeeded most likely his Indian predecessor Gautama Zhuan, who passed away in 776 AD, earning eventually the title of *Sitianjian*, or Director of Astronomy.

The same name Wenzhen is noted also in the list of Christian clergies on the Xi'an stele, with the Syriac transcription *Lūqā* (Rong, 2001 [1998]: 256). At the time of the stele (781 AD), Li Su or "Luke" if our identification is correct, was at the age of thirty-eight and must have been holding a somewhat senior position at the Bureau of Astronomy. Given the pres-

tige of a ranked official and his Christian background, "Luke" doubtless belonged to the elite Christian community in Chang'an. Furthermore, "Luke" the astronomer must have been familiar with the Persian and Greek astral science as evinced from the date of the stele. The fact that he was brought all the way from the south to fill up a court vacancy suggests not only a want of talent in central China after the disastrous An Lushan rebellion (755 - 763 AD), but also that Luke's skill as an astronomer, must have rivalled that of his Chinese and Indian predecessors and contemporaries.

Prior to Luke's rise in the Bureau, the Gautama family of Indian origin had been employed for three generations (665 - 776 AD), with remarkable achievements such as those of Gautama Siddha, author of the astral anthology *Kaiyuanzhanjing* and the Indian astronomical treatise *Jiuzhili* (Yabu'uti, 1979; Chen JJ, 1985: 321-327; Sen, 1995). The role the foreigner astronomers played in the Tang court is noteworthy as it demonstrates the interest in foreign ideas within the multiethnic Tang society on one hand, as well as the special role the astral science played in Chinese politics on the other. Luke, like other skilled foreigners and Chinese with special talents were recruited directly by the emperor and given special titles, bypassing the official imperial examination system (Lai, 2003: 332-336). Due to the technical as well as the confidential nature of those working in the Bureau of Astronomy, who handled sensitive matters pertaining to state security, such arrangement in particular with the foreigners who had less ties with the Chinese, would have been a politically sound choice.

### 2.2. *Yusi jing - Dorotheus' astral treatise in Chinese?*

According to the Tang official records from the *Xintangshu*, an astral treatise titled *Duliyusi jing* of two fascicles, was brought by Li Miqian<sup>2</sup> to China in the late eighth century, and was translated by a certain "Qu". Based on the extant materials, including testimonia in Japanese documents, the foreign-sounding transcription of "Duliyusi" in the title, the family name "Li" associated with the Persian Christians in China, and the purported date of the translation, scholars have suggested the classical Greek genethliacal astrology exemplified by Ptolemy's *Tetrabiblos* to be its source and that the East Syriac Christians were responsible for its transmission (Chavannes and Pelliot, 1913: 134; Yabuuti, 1963: 169-172; Yano, 1986: 139; Yano, 1990).

In a recent study, the author identified the content of an hitherto unexamined text titled *Xitian yusijing*,

<sup>2</sup> "Michael" (?). Possibly also a Perso-Syriac Christian.

a sixteenth-century abridgement of the *Yusi jing* which bears resemblance not to Ptolemy's *Tetrabiblos*, but to Dorotheus' *Carmen Astrologicum* (Mak, 2014). Dorotheus' work survives largely in its Arabic translation, which was in turn based most likely on a Middle Persian exemplar (Pingree, 1976). The content of this Chinese version of Dorotheus' astrological poem contains key elements of practical horoscopy such as planetary exaltation given in degrees, twelve *tópoi*, trigon and sect, doctrine of the third day of Moon, lots, and annual profecion (Mak, 2014: 125-128). In other words, the text is not intended to be a philosophical treatise, but a practical manual containing specific techniques and values – a key difference between such genre of horoscopic treatise and Ptolemy's *Tetrabiblos* (Riley, 1987).

**3. SINICISATION OF HELLENISTIC ASTRAL SCIENCE**

The *Yusi jing* enjoyed only a short-lived popularity in China. Whereas in Japan, the text continued to be cited for horoscope readings in the thirteenth century, centuries after it was imported by the esoteric Buddhists in the ninth century (Yano, 1986: 164-173), in China the original text was forgotten before long. Its content, however, was absorbed into the Taoist Canon, as well as a large number of once popular, but now little-known works of divination, where the original Hellenistic horoscopy was transformed in a variety of ways.



Figure 2. A sixteenth century quadrante "Chinese horoscope" with twelve zodiac signs (*Sikuquanshu*, *Xingxuedacheng* 1.5)

In one variety of what Needham describes as "Chinese horoscope," such as those found in the fourteenth century *Zhengshixing'an* (Needham, 1956: 351-353, Plate XVII), basic Greek elements such as the twelve *tópoi* and planetary longitudes can be readily discerned. However, there are also non-Greek elements such as the four pseudo planets

*Rāhu*, *Ketu*, *Yuebei* and *Ziqi* (the first two are Indian, and the other two are of uncertain origin), as well as other distinctly Chinese elements such as the twenty-eight lunar lodges and the sexagenary dating system. In another variety as represented by a sixteenth century quadrante sample found in the *Xingxuedacheng* (Figure 2), the twelve zodiacal signs are found in their sinicised form, together with Chinese place names assigned to each house in the tradition of astral geography. Both varieties may be considered as examples of sinicisation of Hellenistic astral science.

Among the most popular varieties of Chinese mantic technique influenced by Greek astral science is the *Ziwei doushu* (Figure 3), a form of fate calculation which is still widely practiced today in traditional Chinese societies such as Taiwan and Hong Kong. It bears the outward appearance of a quadrante horoscope with twelve *tópoi*, but operates completely on numerological principle which has no astronomical significance (Ho, 2003: 74-77). The positions of the pseudo planets and astral entities are determined by the *bazi*, or the four sets of number derived from the year, month, day and hour of birth. While this may be considered an extreme case of sinicisation, such development has completely deviated from the trajectory of Greek horoscopy. In particular, the absence of astronomical content renders the system rather an elaborate outgrowth of the traditional Chinese fate calculation, with distinctive elements such as the *yinyang*, five phases (*wuxing*), and above all, a deeply rooted cosmology embodied by numerological divinatory works such the *I Ching* (*Yijing*), albeit inspired by certain foreign elements found in the Hellenistic horoscopy.

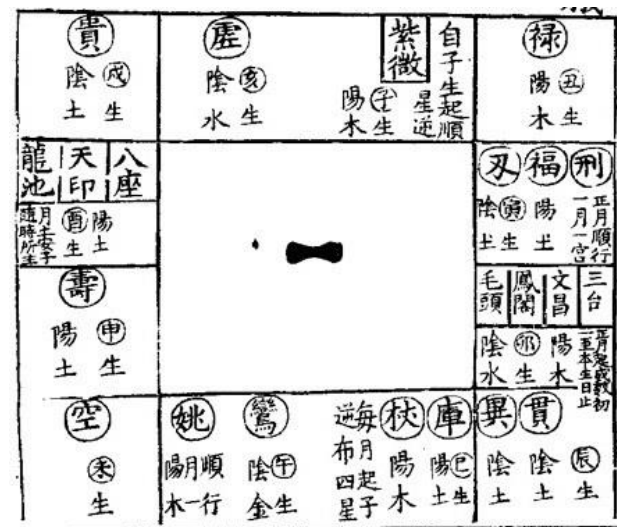


Figure 3. A form of fifteenth century (?) fate calculation with Hellenistic influence (*Zhengtong daoang*, *Ziweidoushu* 1.10)

#### 4. CONCLUDING REMARKS: OVERLAPPING ASTRAL SCIENCES IN EURASIA

To understand the role of the astral science of the Syriac Christians in China, one should put it within the broader picture of the eastward transmission of Hellenistic astral science, as well as the general circulation of knowledge in Eurasia (Figure 4; Mak, 2015). During the first millennium, Western knowledge began to spread throughout the rest of Asia. The Hellenistic astral science was continuously introduced by various groups of foreigners to India, China and the neighbouring regions, and was absorbed readily into the indigenous systems to various extents. The process results in an overlapping networks of scientific and pseudo-scientific ideas where foreign and native concepts mixed and interacted with each other in a dynamic way.

Some questions we may want to ask: Why did the Christians bring an astral text such as that of Dorotheus to China in the first place and why did the Buddhists appropriate it instead of developing their own? Up to the Tang period, the astral science in China was largely monopolized by the state and astronomical knowledge was guarded as a matter of state security. Horoscopy as a new form of divination which pertains not so much to the state but to the individuals no doubt generated new interests at a time when the Chinese were extremely open to

foreign ideas. The Syriac Christians, just like the Jesuits centuries later, were keen to take the opportunity to demonstrate their foreign and much sought after knowledge of the heaven. The Buddhists, on the other hand, never had a proper body of astral knowledge of their own, and in particular, they lacked the astronomical skills to compute planetary longitude needed for the horoscopes. Their adoption of the most advanced astral manuals and ephemerides seems a natural one. The Buddhists thus accepted the non-Indian astral texts such as the *Yusi jing* of the Syriac Christians and continued to disseminate it as if their own, though such texts had all along been considered extra-canonical.

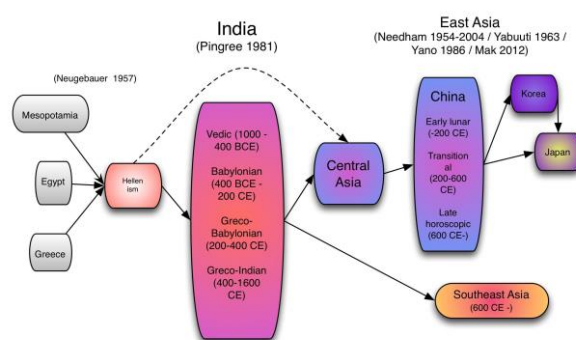


Figure 4. Eastward transmission of Hellenistic astral science (Mak 2015: 169)

#### ACKNOWLEDGEMENTS

This research was conducted as part of the project “Overlapping cosmologies of pre-modern Asia” and was supported by JSPS KAKENHI Grant Number 15K01118.

#### REFERENCES

Baum, W. and Winkler, D.W. (2003) *The Church of the East: A Concise History*, London/New York.  
 Chavannes, Éd. and Paul P. (1913) Un traité manichéen retrouvé en Chine II. *Journal Asiatique* 11<sup>e</sup> série, tome 1 (1913), 99-199, 261-392.  
 Chen, G.Y. (1981) Xi’an dongjiao sanzuo tangwu qingli ji. *Kaogu yu wenwu* No. 2, 25-31.  
 Chen, J.J. (1985) Qutanxida he ta de tianwen gongzuo. *Ziran kexueshi yanjiu* [Studies in the History of Natural Science] No. 4 (4): 321-327.  
 Ho, P.Y. (2003) *Chinese Mathematical Astrology: Reaching Out to the Stars*, London/New York.  
 Horne, C.F. (1917) *The Sacred Books and Early Literature of the East, Vol. XII, Medieval China*, New York.  
 Mak, B.M. (2014) *Yusi Jing - A treatise of “Western” Astral Science in Chinese and its versified version Xitian yusi jing*. *SCIAMVS* No. 15, 105-169.  
 Mak, B.M. (2015) The Transmission of Buddhist Astral Science from India to East Asia: The Central Asian Connection. *Historia Scientiarum* No. 24 (2), 59-75.  
 Needham, J (1956) *Science and Civilisation in China, vol. 2, History of Scientific Thought*, Cambridge.  
 Neugebauer, O. (1957/1968) *The Exact Sciences in Antiquity*, 2<sup>nd</sup> unabridged and corrected ed. in 1968, New York.  
 Pelliot, P. (1996) *L’inscription Nestorienne de Si-Ngan-Fou*, edited with Supplements by Antonino Forte, from manuscripts dated prior to 1920, Roma/Paris.  
 Pingree, D. (1976) *Dorothei Sidonii Carmen Astrologicum*, Leipzig.  
 Pingree, D. (1981) *Jyotiḥśāstra: Astral and Mathematical Literature*, Wiesbaden.

- Riley, M. (1987) Theoretical and Practical Astrology: Ptolemy and His Colleagues. *Transactions of the American Philological Association* No. 117, 235-256.
- Rong, X.J. (2001/1998) Yige rushi tangchao de boshi jingjiao jiazhu [A Persian Nestorian Family in Tang China]. In *Zhongguo zhongguo yu wailai wenming*, 238-257. Reprinted from *Yilangxue zai Zhongguo lunwen ji*, Vol. II, Ye Y.L. (ed.) (1998), 82-90.
- Saeki, P.Y. (1937/1951) *The Nestorian Christian Documents and Relics in China*, second ed. in 1951, Tokyo.
- Sen, T. (1995) Gautama Zhuan: An Indian Astronomer at the Tang Court. *China Report* No. 31 (2), 197-208.
- Takahashi, H. (2010) Between Greek and Arabic: The Sciences in Syriac from Severus Sebokht to Barhebraeus. In *Transmission of Sciences: Greek, Syriac, Arabic and Latin*, H. Kobayashi & M. Kato (ed.), Tokyo.
- Takahashi, H. (2015) Syriac as the Intermediary in Scientific Graeco-Arabica: Some Historical and Philological Observations. *Intellectual History of the Islamicate World* No. 3, 66-97.
- Takakusu, J. (1896) The Nestorian Christian Missionary Adam, Presbyter, Papas of China, Translating a Buddhist Sūtra. *T'oung Pao* No. 7, 589-591.
- Yabu'uti, K. (1963) *Chūkoku chūsei kagaku gijutsushi-no kenkyū*, Tokyo.
- Yabu'uti, K. (1979) Researches on the Chiu-chih li. *Acta Asiatica* No. 36, 7-48.
- Yano, M. (1986/2013) *Mikkyō senseijutsu*, second revised and expanded ed. in 2013, Tokyo.
- Yano, M. (1990) A Note on Ptolemy in China. In Haneda, Akira (ed.), *Documents et archives provenant de l'Asie centrale*, Kyoto, 217-220.