

Brussels, October 21st, 1955

I stay at your disposal for any further information
concerning the history of the history of astronomical
instruments. You might answer at the Belgian Société
de Recherches de Nankin, China, of which I am the president,
3 Avenue Cir-oulaise, Uccle-Brussels, or at my private address hereunder.
Thanking you in advance, I remain, dear Sirs,

Dear Sirs,

As I don't know if you read the french language, I am writing this letter in english, but you can answer in french or german if you prefer.

My nephew, Mr. Jean Lavachery, visited China some months ago with a mission of european young men and brought me some information on the antique chinese astronomical instruments kept in your Observatory. Although these instruments are reputed, I was never able to get a thorough description nor good photographs of the same. Anyhow, what I have is sufficient to get a general idea of their purpose and construction.

This letter regards a particular part of one of the above instruments: Mr. Lavachery's notes mention:

N° 4: Instrument called Houen Yi, invented by Tsang Hen at the Han period, and built at the same time.... The stars are examined through a hollow, square tube... The instrument was taken by the Germans in 1900 etc...

Now this might be very interesting for the history of chinese astronomy. You certainly have heard about the "astronomical jades" called siun-chi or siuan-ki, i.e. the indented jade disks kept in many collections. Up to the last years, nobody had ever established a consistent theory about the use of these jades. I have published in several reviews a paper on the subject, and send you herewith a copy (the very last available one) of my lecture at the belgian Académie de Marine in 1949. This paper was translated in the japanese language in THE HEAVENS, bulletin of the Oriental Astronomical Association, 1952, N° 4-5-6 and 7-8-9, which you probably have; an other article was published in Popular Astronomy, May 1950

The main point in these papers is my interpretation of several sentences, notably by Ts'ai Yong, by Tcheng Hiuan, and in the Tcheou-Pei, which refer to the observation of the stars through a square tube. The purpose of this square tube was never explained, and I think that my explanation might be considered. (See my paper, pages 15-16)

I would gladly have your opinion about my theory, if you care to read my papers. Besides, I would like to have a good photograph of the instrument Houen Yi in your collections, with, if possible, a sketch of the famous square tube in it, its dimensions, and your opinion about its use. Has anything been recently published on the subject of these instruments ?

Have you any proofs that the Houen Yi in your observatory is the original one, dating from the Han period ? Or was the instrument

rebuilt more recently, according to some tradition or after some model?

I stay at your disposal for any further information, especially on the subject of the history of astronomical instruments. You might answer at the Belgian Société d'Astronomie, of which I am the president, 3 Avenue Circulaire, Uccle-Brussels, or at my private address hereunder.

Thanking you in advance, I remain, dear Sirs

Dear Sirs,
yours very truly

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Henri MICHEL

54 Rue de Tenbosch, Brussels Belgium

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中國科學院紫金山天文台

Purple Mountain Observatory

Academia Sinica

Nanking China

November 28, 1955

Prof. Henri Michel
President of Belgian
Society of Astronomy,
3, Avenue Circulaire,
Uccle-Bruxelles, Belgium

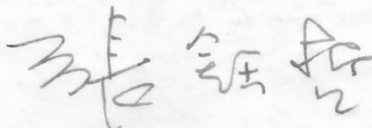
Dear Sir;

Thank you for the most interesting article on Chinese astronomical jade which you sent us in October. I often came across the name Siun-Chi-Yü-Heng in ancient Chinese classic. I formed the vague idea that it might be some sort of armillary sphere, but always entertained the doubt as to how could such an instrument be made of precious stone. Now your explanation seems to be the most plausible one. You have obtained drawings of Siun-Chi in the collection of four different museums. It testifies to the thoroughness with which you have carried on this research. It would be interesting if you can obtain photographs as well as the dimensions of these jades.

Enclosed please find a photograph of the Houen-Yi or armillary sphere of our observatory. As I understand, it was patterned after an instrument made by Kuo Sho-Ching (1231-1316) and it was constructed about five hundred years ago. The square tube here does not have the same significance as you conceived in the case of Yü-heng. The sighting tube assumes a square section simply because it can thus slide conveniently between two parallel rings. You will have no difficulty to identify it in the enclosed picture, pointing approximately in the direction between one hour and seven hour of an ordinary clock dial.

Sometimes in the near future, I shall present your interpretation of Siun-Chi-Yü-heng to the Chinese reading public. If there should be comments about your theory from those conversant with the study of archaeology or history of astronomy, I shall communicate them to you. Do not hesitate to write us if we can be of service to you in your investigations.

Yours very sincerely



Y. C. Chang-Director

ri MICHEL
e de Tenbosch
Brussels

Brussels, January 10th, 1956

Mr. Y.C.Chang, Director
Purple Mountain Observatory
Academia Sinica, Nanking

Dear Sir,

I am very much obliged to you for your informations and photograph. As regards the Houen-Yi, yours is the very first photo which reproduces clearly this instrument. I have often seen photos of the famous instruments of the former Pekin Observatory, but none of these reproductions is clear. I send you, under separate cover, a copy of the Bulletin de la Société Belge d'Astronomie, Déc. 1900, where you shall find, page 283, an article on the former Pekin Observatory.

According to Father Lecomte "Nouveaux Mémoires sur l'Etat présent de la Chine," Amsterdam, 1697, T.I, p. 101, the large bronze instruments, of which your armillary sphere is one, were made under F. Verbiest supervision, about 1680, and the original instruments by Kuo Sho-King have been discarded and are probably lost. F. Lecomte's drawings in the above mentioned book are unaccurate. Do you know if a better and complete description of the instruments has ever been published, and besides, if they are presently dispersed or partly lost ?

As regards the siun-Chi, I send you herewith a list of all the serrated jade disks which I was able to know of, and of which I got photographs or drawings. The question whether the square tube ts'ung may be identified with the Yü-Heng is still dubious, but I do not see which other jade might be considered for the purpose. The objection that many ts'ung have not the convenient dimensions, being too short, or too large, or ornamented, or of a much later epoch, is not, in my opinion, very serious: with the time, these objects have completely lost their original purpose, and became ornamental or honorific, just as e.g. our crosses have presently nothing common with the torment instruments used by Romans.

I go even so far as to consider the plain Pi as a possible tool for finding the pole, of course with less precision as with the siun-Chi, but long before the siun-Chi was imagined. I would greatly appreciate the opinion of Chinese historians on the subject, and if you are good enough to publish something about my interpretation, I would gladly hear about the reaction

Meantimes I remain, dear Sir

your most obliged

H.Michel

Under separate cover: Bulletin S.B.A.1900, 12.

A LIST OF SIUN-CHI (ASTRONOMICAL JADES)

examined by

Henri MICHEL, 54 Rue de Tenbosch

Brussels

Owner	Diameter mm		Particulars
	exterior *	hole	
Sonnenschein, Glencoe	127	54	Only two rows of serrations
Wu Ta Ch'eng (Laufer)	?	?	
Loo, New York n° 297	108	64	Five rows of serrations !
Loo, New York n° 299	114	67	Three teeth
Brit.Mus. Eumorphop.	151	75	Four rows of serrations
Musée Guimet, Paris	150	67	Fake ?
Gem. Museum, Den Haag	180	68	Very fine
Harvard, Fogg Museum	130	71	Four teeth
d° d°	130	68	Three teeth
d° d°	120	64	Very fantastic, 4 teeth
d° d°	140	69	Very regular, 3 teeth ,
Schoenlicht, New York	100 ?	50 ?	Photo seen, very good
Ostasiatiska Mus.Stockholm	?	60	Very irregular.Reproduced
Brussels Museum (Huet)	142	63	Very fine
Brit. Mus. Eumorphop.II	141	69	Very fine
Bahr coll. (after Nott)	136	64	Not seer, very fine
Vict.& Albert M.London	120	70	On tooth broken
Ontario Mus. Toronto	140	65	No lines engraved
d° d°	100	60	d° d°
H.Michel, Brussels	130	70	Repolished ?
Ryksmus. Leiden	145	53	3 teeth, no serrations
Univ. of Penn. Phila.	115	?	d° d°

* The exterior diameter is but an average, the teeth and serrations preventing any precise measurements.