

An Introduction of the Plan for the Korean Astronomical History Museum of KASI

Sang Hyuk KIM¹ and Byeong-Hee MIHN¹

1 Korea Astronomy and Space Science Institute, Korea University of Science and Technology. astro91@kasi.re.kr, bhmin@kasi.re.kr

Korean astronomy has a long history, as illustrated by the mural painting of stars in the *Goguryeo* Tombs (4th~6th Century), and the *Cheomseongdae* (瞻星臺, an observational platform for astronomy, 7th Century). The Korea Astronomy and Space Science Institute (hereafter KASI) has collected and conserved historical materials on Korean astronomy, and also reproduced old Korean astronomical instruments. Old and modern examples of Korean astronomy have been displayed inside and outside the KASI headquarters. Since 2014, the historical astronomy research group of KASI has worked on developing a Korean Astronomical History Museum (韓國天文史料館) to lead the way in the collection and conservation of Korean astronomical materials, and find precious Korean astronomical heritage, and contribute to the popularization of science through the exhibition and education of that heritage. In 2015, KASI began to create a database of administrative and academic materials concerning KASI members over the past 40 years. We conceived the goal of our museum and categorized the modern and traditional parts of the Korean astronomical heritage. We expect that the Korean Astronomical History Museum will be the control facility for the collecting, studying and education of the astronomical heritage of Korea.

1. Introduction

The Korea Astronomy and Space Science Institute (hereafter KASI) was established in 1974 to conduct research on astronomy and space science, and as of September, 2015 now employs 377 staff members (Fig. 1). KASI also manages a large observatory and is involved in the development of astronomical instruments.

Korea has a long history in the practice of astronomy. This can be seen, for example, in a mural painting about stars in the *Goguryeo* Tombs (4th~6th Century), and the *Cheomseongdae* (瞻星臺, an observational platform for astronomy, 7th Century). A large volume of observational data was recorded in the history books of the *Goryeo* (918-1392) and *Joseon* (1392-1897) Dynasties. The *Cheonsang-yeolcha-bunya-jido*, which was created in 1395, has a planisphere with 1437 stars marked on stone.

KASI has collected and conserved historical materials on Korean astronomy, and has also restored the Joseonese astronomical instruments. More recently, KASI has run a small-size gallery, an exhibition hall, and an outdoor exhibition.

The program of restoring historical astronomical instruments began in 1997 and continues today. The first major project in 1997 was the reproduction of ancient star charts, *Hwang-do-nambuk-yang-chongseong-do* and the *Hon-pyeong-ui*, which were based on the relic, and the historical records, respectively. One of



Fig. 1 KASI Headquarters

the representative astronomical instruments of the Joseon Dynasty, *Ganui*, was manufactured and set up with the *Ganuidae* platform in the front yard of KASI headquarter in 2000. A replica of the *Cheonsang-yeolcha-bunja-jido*, registered as a Korean National Treasure (No. 228), was made in 2007. From 2001 until now, KASI has also continuously manufactured *Angbuilgu* (scaphe sundial), *Ilseongjeongsiui* (sun-and-star-dial), *Soganui* (small simplified armillary sphere), and *Gyupyo* (gnomon), and so forth.

2. Korean Astronomical History Museum Project

2.1. Mission and Purpose

The mission of the Korean Astronomical History Museum (hereafter KAHM) as an affiliate of KASI, is the following: “The Korean Astronomical History Museum shall lead the collection, conservation, research, and exhibition of Korean astronomical heritage, and also contribute to the development of scientific culture and scientific education, and the succession of Korean tradition and pride in astronomy”.

KAHM has three purposes. First, it secures Korean astronomical assets through the collection and conservation of Korean astronomical heritage. Existing astronomical instruments are being discarded as brand-new ones are being introduced in Korea. These sudden changes are being caused by the rapid development of science and technology around the world. Therefore, it is important that an institute or organization should be established as a control facility, to systematically collect and conserve astronomical assets which lately have become disused.

Second, the basis of the scientific culture in Korea can be found through the study of Korean astronomical assets. Traditional astronomical assets have produced modern astronomical culture. The value of this traditional and modern scientific culture can be recreated by examining various viewpoints, through research of the domestic and foreign astronomical literature, record relics, and heritages.

Third, KAHM can contribute to the dissemination of scientific culture through astronomical heritage exhibitions and education. Recently, astronomical scientific culture has only been introduced in limited places in existing museums and science



Fig. 2 Vision and Goal of KAHM

museums on the basis of their distinct historical characteristics. We would like to communicate with spectators, researchers, and educators through the comprehensive exhibition and education of astronomical heritage, from the past to the modern.

2.2. Vision and Goals

KAHM's vision is "discover the value of Korean astronomical heritages, connecting tradition and the future." And, the goals from 2015 to 2025 are the construction of KAHM's building, and building the collection, as well as the conservation and research of modern and traditional astronomy and heritage. First, we plan to carry out basic research to construct KAHM from 2015 to 2017. Then, we plan to fund and construct from 2018 to 2020. From 2021 to 2025, we plan to implement a 5-year KAHM program of collecting, conserving, research, exhibition, and education.

2.3. Collections

Astronomical historical materials are classified from traditional to modern. Modern astronomical materials include research materials, astronomical instruments, and administrative materials inside and outside of KASI. Traditional astronomical materials involve the restoration and replication of astronomical relics and the originals, and so forth.

The period of modern astronomical materials will range from the early 20th century (1910) to the present, and includes physical materials and scientific results. The main objects are research materials, documents from various projects, astronomical policies and administration materials, and profiles of those who have worked at KASI, as well as other astronomers.

The traditional astronomical materials will cover the period from the Bronze Age to the 20th Century (1910) and include material and spiritual heritages. It includes the restoration and replication of astronomical instruments, astronomical charts, almanacs and astronomical literature and other records.

3. Expectations

KAHM expects to accomplish the following. First, KAHM will carry out its role as a control facility for astronomical heritages' collection, conservation, research, exhibition, and education in Korea. Second, modern astronomical assets will be



Fig. 3 Collection of Historical Materials for Astronomy

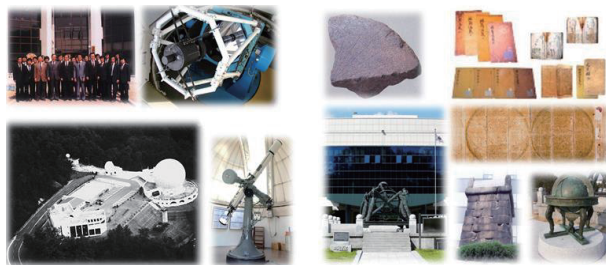


Fig. 4 Modern Materials (left) and Traditional Materials (right).

collected and secured in the same region. Third, Korean scientific culture will be highlighted and shared with other countries.

KAHM wishes to create a synergistic effect on an academic level by producing an easily accessible point for communicating science and technology. KAHM hopes that various and abundant astronomy-friendly materials will be produced and shared to create a connection with the public.