Opening Talk – The Need for Museum-like Activities –

Hidehiko AGATA¹ 1 National Astronomical Observatory of Japan. h.agata@nao.ac.jp

I would like to talk about the purposes and goals of this International Symposium, as well as the additional events we have planned. The purpose of this symposium is to share the latest information and to discuss about how to develop and plan museum-like activities for astronomical research institutions and universities in collaboration with natural history museums and science museums. Another purpose of the symposium is to gather opinions for "Basic Concept for the National Astronomical Observatory Japan (NAOJ) Museum (tentative name)" proposed by the Public Relations Center (PRC), NAOJ.

1. Introduction

Tonight (September 27, 2015) we have the traditional "moon viewing party" to celebrate the harvest moon, a tradition passed on from generation to generation in East Asian countries. Astronomy is said to be one of the oldest field in academics, and ideas about the stars and the Universe have been connected tightly with human daily lives throughout the ages. Without doubt, astronomy has been "everyone's science" in the history of human race to improve their own lives and cultures.

In the present day, many of the latest astronomical observatories are built in remote areas: we cannot touch space telescopes and the latest ground-based telescopes are located at the summit of a high mountain. Youngsters of the next generation, taxpayers, and astronomy enthusiasts experience the difficulty of accessing observational sites. Therefore, observatories are using the internet for outreach activities, developing educational materials, and using various media to communicate all over the world. However, it has been pointed out that there are limits to such activities. World-leading universities and research institutes in astronomy and space science started realizing the importance of "face-to-face" education and outreach activities.

The purpose of this international symposium is to present the research results of the "formation of international academic hub for scientific research" project (funded at the discretion of the president of the National Institute of Natural Sciences) conducted over the past six years from 2010 through 2015 by the Public Relations Center. Another purpose is to exchange opinions inside and outside of Japan about the "Basic Concept for the National Astronomical Observatory Japan Museum (tentative name)" developed mainly by the limited-term "Museum Project Office" which was newly established in the Public Relations Center in 2013.

2. Mission & Goals

The Public Relations Center of the National Astronomical Observatory of Japan was established in 1998 and 18 years have passed since this center started dissem-

inating astronomical information to the public.

4 -

This is the first time our center has held such a large-scale international conference. With financial support from the Foundation for Promotion of Astronomy, 96 participants from nine countries (China, South Korea, Thailand, Indonesia, Germany, The Netherlands, Portugal, United States and Japan), attended to the symposium. In addition, seven people joined by way of teleconference systems from six locations in Japan and overseas (NAOJ in Mizusawa, Nobeyama, Okayama, and Hawai'i as well as locations in Indonesia and the United States).

This symposium is the first-ever opportunity for public information officers and education and public outreach staff members at major research institutions of each country, including the NASA Hubble Space Telescope Science Institute (STScI), the European Southern Observatory (ESO), the European Space Agency (ESA), the Korea Astronomy and Space Science Institute (KASI), the National Astronomical Research Institute of Thailand (NARIT), the JAXA Institute of Space and Astronautical Science (ISAS) and the National Astronomical Observatory of Japan (NAOJ), got together. Directors of observatories affiliated with an university also participated in the symposium, including the Observatory of Leiden University (the Netherlands), the Bosscha Observatory of the Institut Teknologi Bandung (Indonesia), and the Kwasan Observatory of Kyoto University, as well as representatives and curators from related science museums, including the Rose Center for Earth and Space's Havden Planetarium at the American Museum of Natural History in New York, which leads the world as both a museum and as a science museum of astronomy and space, the Shanghai Planetarium (Shanghai Science & Technology Museum Branch) (under construction), Gunma Astronomical Observatory, Sendai City Astronomical Observatory, Nagoya City Science Museum, and Osaka Science Museum. Among participants a lot of beneficial presentations and fruitful, passionate discussion were made.

The main topics for this symposium are as follows.

- 1. Activities of each country's astronomy museums.
- 2. Science communication methods in astronomy museums.
- 3. Challenges of building an astronomy museum.
- 4. Management of astronomy museums.
- 5. Significance of astronomers interacting with visitors.
- 6. Opportunities for future cooperation.
- 7. Usage of visual contents in astronomy museums.

3. Program & Sections

The three-day symposium consisted of the following six sessions. Day 1

Session 1: The NAOJ Museum Plan

Session 2: Museum Activities at each Research Institute/Museum (1)

Day 2

Session 3: Collaboration between Science Museums and Research Institutes

Session 4: Diverse Approaches at Museums and Research Institutes

Session 5: Museum Activities at each Research Institute/Museum (2)

Day 3

Session 6: Discussions and Conclusions

Group discussions were held in three themes: 1) Planning, 2) Operations and 3) Content at an astronomy museum.

Many participants submitted their oral presentations. Due to the time constraints, we had to ask some of them to make poster presentations. A total of 32 presentations were provided (25 oral presentations and seven poster presentations). In addition to the presentations, summaries of the group discussion were published in the proceedings.

Throughout this symposium, we were able to share the latest information of museum-like activities among astronomical research institutes inside and outside of Japan, and share information about domestic and international trends and future plans related to astronomical education and science communication activities regarded to astronomy and the Universe. I am sure that participants enjoyed the symposium and that it provided a valuable experience for everyone involved.