



# A More Global Strategy for IAU: Boosting Astronomical Research and Education in Developing Countries

— An Interview with New IAU President Norio Kaifu

*Q: Congratulations to you for becoming the new IAU president! What are the main objectives of the IAU in the coming three years?*

**President Kaifu:** The objective of the IAU is to promote astronomy in all its aspects. The priority for the IAU at this time is to broaden the activities of astronomy in research, education and public outreach all over the world. We see more countries joining cutting-edge research, but unfortunately we still cannot share the excitement of astronomy with many people in the developing world. Therefore, we started the IAU's 10-year strategic plan, "Astronomy for the Developing World", succeeding the IYA2009. The platform for the plan was settled during the past three years, thanks to the OAD and many supporters, so the coming three years will be important for the implementation. The IAU is opening the doors to the entire world.

Secondly, the change of structure of the IAU organization has been approved by the General Assembly. The new Division structure gives the IAU more flexibility to cope with the rapid evolution of astronomy. We will work with new Division Presidents on Commissions and Working Groups to accomplish this change as soon as possible.

*Q: You have been promoting the construction of large telescopes. What will be the impact of these telescopes, and how do you foresee the future of astronomy which requires ever larger telescopes?*



Prof. Norio Kaifu, IAU new President (2012-2015).

**President Kaifu:** We will have ALMA, JWST, the next generation optical/IR telescopes, SKA, etc. This is amazing! The Universe is vast and rich and astronomers have always been confronted with unexpected discoveries.

Dark energy will be studied extensively by some of those telescopes. It will require a rather long time for us, but when we understand it in some detail we may be able to have a peek

into the reality of the “space” where we are living.

Exosolar planets and life are among the most interesting topics for me. I have started pondering about the conditions that may have allowed the existence of life on Earth, since I observed many organic molecules in dark clouds at the Nobeyama Radio Observatory. Recent progress in the understanding of exosolar planets is remarkable. I expect we get some evidence for life beyond the Earth within the first half of this century. I actually want to see it happening during my life.

All telescopes mentioned above are based on international consortiums. We understand that the sizes of telescopes are approaching the limitations of the world economy. The construction of huge telescopes might inevitably be slowed down; however, it will give us time to introduce a more global strategy of international cooperation for our future and to make innovative developments. During that stage the developing world will play an important role in global cooperation. We already see this happening in the SKA project.

*Q: You have spent a significant part of your life on promoting cooperation in Asia. How do you see the future of astronomy in Asia?*

**President Kaifu:** In 1990 we started cooperation of astronomy in East Asia with many friends in this region. Regional cooperation is a keyword. It is important even, or especially, in the global era. East Asia has difficult historical matters which Japan has responsibility of its considerable part, as well as different political and economical challenges. Nevertheless, we share a long history of exchange, and we are neighbors.

We organized the East-Asian Astronomers Meeting (EAMA) as a platform of continuous mutual exchange and cooperation. Based on it we had many activities, including the East Asia Young Astronomers Meeting (EAYAM), a search for telescope sites in western China, the East Asia VLBI Network, and many others. Based on the recommendation by EAMA, the East Asian Core Observatories Association (EACOA) was established in 2005 by ASIAA, KASI, NAOC and NAOJ. Directors meet regularly to discuss exchange of young astronomers, cooperation in large international telescope projects, etc. We wish to proceed toward further cooperation of East

Asian astronomy.

The South East Asian Astronomy Network (SEAAN) was also established in 2006 by eleven countries and its activity is growing. Thailand established NARIT with a 2.4-m telescope which will be used for their cooperation. These are the movements for regional cooperation in Asia. Those activities at various regional levels will provide important steps for Asian astronomy in higher level cooperation, such as the future “Asian Astronomical Observatory”; this has been my dream for many years.

*Q: You have been actively participating in the scientific collaboration between Japan and China. Do you have any suggestions for your Chinese colleagues?*

**President Kaifu:** I have been involved in China-Japan cooperation for mm/sub-mm astronomy, telescope site survey and many exchange programs with Professor LIU Caipin, partly for EAMA activities. I have had a joyful time and it is a great pleasure to see advanced results based on and beyond that cooperation in this IAU General Assembly. Chinese astronomy is really growing rapidly.

Allow me to reply to a few comments about Chinese astronomy. Firstly, I see some gap between astronomy and engineering in China. Also, strong leadership of astronomers is essential for the success of a high-level project. Also, astronomers should work on engineering if necessary. Encourage astronomy graduate students to do instrumentation. In this way we can make good telescopes and instruments, and resources for next generation developments will be accumulated for the future.

The second comment is also on human resources. Chinese astronomy was damaged through the invasion by Japan, the Civil War and then by the Cultural Revolution. The lack of a number of generations to lead large projects seems still to be a subject, as China is pushing many projects ahead. I recommend encouraging (very) young astronomers to lead important projects, and to excite students to get them into astronomy.

(This is an interview between new IAU President Norio Kaifu and Prof. WANG Jingxiu during the 28<sup>th</sup> IAU General Assembly. It was originally published in the 10<sup>th</sup> issue of *Inquiries of Heaven*. The present title is added by *BCAS* editors.)