

Session: [B5B-5] S7 : Historical Astronomy, Astronomy Education and Public Outreach

Date: August 22, 2014 (Friday)

Time: 11:00~12:30

Room: Room E (Room 107)

Chair: Sze Leung Cheung (IAU Office for Astronomy Outreach)

[B5B-5-1]

11:00~11:15

[Invited] Documentary Series on Astronomy Research in India- Astroproject

Rakesh Rao (Encsitec Production, India)

Astroproject is an initiative to develop a Documentary Series on Astronomy, Astrophysics and Space Science related research in India. The project received sanction from the International Astronomical Union Office of Astronomy for Development (OAD) to be implemented for the year 2014.

The Project concerns with documenting the Astronomy, Astrophysics and Space Science Research Institutions along with their facilities across the country. The discoveries and research carried out by the scientists in these institutions are guiding us in revealing several mysteries of the universe. This groundbreaking work specifically needs to be highlighted among the students across the educational institutions in India and also emphasise the importance of research in the field of astronomy.

The final documentary series shall be screened in Schools, Colleges and Universities across India and would be done with the help of several stake holders like Research Institutions, Educational Institutes, Universities, Government bodies, Non Profit Organizations and Amateur Astronomy clubs. The documentary series shall also be dubbed in national language "Hindi" so as to reach rural centres for screening. Social Networking medium on Internet shall play a major role in spreading awareness about this project. The documentary series shall be made available for free download. Also broadcasting through television programs is highly envisaged.

We would like to present the work undertaken in documenting all these institutions and also present the roadmap in carrying Astronomy outreach activities across the country.

[B5B-5-2]

11:15~11:30

[Invited] The Space and Application Department of University of Science and Technology of Hanoi: Toward the Young Space and Astronomy Generation

Nguyễn Lương Quang (Canadian Institute for Theoretical Astrophysics, Canada), Yannick Giraud-Héraud, and Pierre Lesaffre

Space sciences and Space technology are symbols of a highly-developed, technology-based country. In the XXI century, they provide the best access to a powerful and sustainable economy. Recently, the Space and Applications Department has been created by the University of Science and Technology of Hanoi in Vietnam. The department aim at educating students in science, technology and engineering of all areas related to space science and astronomy

The Bachelor-Master-PhD program in Space and Space Applications of USTH delivered entirely in English is a unique educational structure in Vietnam for future scientists who will participate in the development of space technology and science in the next decade. The training system at the USTH is recognized by the European Credit Transfer and Accumulation System (ECTS) and the diploma is co-accredited by Vietnam and France. In this talk, we will describe the educational program, the department structure and the outcome of the first batch of bachelor and master students.

[B5B-5-3]

11:30~11:45

[Invited] Vietnam Astronomical Society: Research, Training and Outreach Activities

Nguyen Quynh Lan (Hanoi National University of Education, Vietnam), Dinh Van Trung, and Nguyen Van Khanh

The Vietnam Astronomical Society, which is a member of the Vietnam Physical Society, has been established almost 20 years ago to promote research, education and public awareness of astronomy in Vietnam. In this presentation I will detail the activities of the VAS, in particular the undergraduate astronomy curriculum at universities, the outreach programs to bring mainstream astronomy to the general public. The main astronomical facilities in Vietnam and current research activities related to astronomy and space science using these facilities will be discussed.

[B5B-5-4]

11:45~12:00

[Invited] Observations of the Annular Eclipse on 2012 May 21 by General Public in Japan

Soma Mitsuru (National Astronomical Observatory of Japan, Japan)

An annular solar eclipse occurred on 2012 May 21 in Japan, and large cities like Tokyo, Osaka, and Nagoya were in the annular eclipse zone. As a result, about 2/3 of Japanese population were able to see the annularity in their homes. At this occasion in order to promote the interests of general public to such a great astronomical phenomenon, we had a campaign of the eclipse observations. Especially we encourage people to report if they were able to see the annularity at their places by the naked eye through eclipse eyeglasses in order to determine the limit line of the annular eclipse zone. In Japan only the northern limit line could be observed since the southern limit line was on the ocean. To tell the truth the northern limit line predicted by the NASA Eclipse Web Site and that by National Astronomical Observatory of Japan were different by about 2.7 km and people were curious to know where the actual limit line would pass. In addition I provided another limit line which should be more precise than any other prediction because I calculated it using precise lunar limb profiles I predicted from the precise lunar topographic data obtained by the Japanese lunar explorer Kaguya. Also I noted that we do not know the precise radius of the Sun (the accuracy of the known radius is about +/- 500 km) and the limit line depends on the actual radius of the Sun, so if we can determine the actual limit line from observations, we can determine the actual radius of the Sun. In the end we had about 15,000 reports of the naked eye observations through our Website. In addition there were many observation groups for which about 30,000 people in total participated in the observations. Each group reported their limit line observation result with respect to my prediction with the Kaguya lunar limb profile. Their results were like "we determined that the limit line was about 300 m north from the prediction." Their overall result was that the limit line observed by naked eye through eclipse glasses coincided with the prediction within the error of +/- 500 m. This error of the limit line location corresponds to about +/- 200 km of the radius of the Sun. Considering the accuracy of the radius hitherto obtained, this accuracy should be surprising. There was also a group of amateur observers who made video observations of Baily's Beads through telescopes to determine the precise radius of the Sun. Their observations are still under analysis.

Poster Session

12:00~12:30

Chairs: Sze Leung Cheung (IAU Office for Astronomy Outreach)

Avivah Yamani (langitselatan)