

IYA and astronomy education in China

Jin Zhu and Haoyi Wan

Beijing Planetarium,
No. 138 Xiwaidajie Street, Beijing 100044, China
email: jinzhu@bjp.org.cn email: why@bjp.org.cn

Abstract. The current situation on astronomy education in mainland China is introduced. IYA 2009 was a great opportunity for promotion of astronomy education and some basic ideas and plans in mainland China are presented.

Keywords. education, international year of astronomy

1. Structures and activities on astronomy education in mainland China

Four bodies were involved in the global IYA activities from China: China-Nanjing (SPoC: Jin Zhu), China-Taibei (SPoC: Wei-Hsin Sun), China-HongKong (SPoC: Kam-Cheung Leung), and China-Macau (SPoC: Albert Wu). Both of China-Nanjing and China-Taibei (which is the official usage in IAU) are using the same name of Chinese Astronomical Society, one located in the Purple Mountain Observatory at Nanjing, Jiangsu province, and another in Taiwan. This brief paper will concentrate on the activities carried out for China-Nanjing (mainland China).

Two sub-committees of the Chinese Astronomical Society in mainland China (CAS-Nanjing) were closely connected to IYA: the *Educational Working Committee* which concentrated on professional astronomy education at the only astronomy departments in 4 Chinese universities; and the *Popularisation Working Committee* which concentrated on astronomical education and outreach for the general public. The *Popularisation Working Committee*, located at Beijing Planetarium, and its roughly 25 members is composed by representatives from all domestic professional astronomical organisations and some regional astronomy societies or associations, individual amateur astronomers, and teachers from middle schools.

The *Popularisation Working Committee* of CAS-Nanjing organised regional astronomical education activities together with other professional and amateur astronomical organisations. As the host of the Committee, Beijing Planetarium performed almost all conventional activities related to astronomy education, including the production and performance of planetarium shows and astronomical exhibits, organisation of observational activities and astronomy lectures for general public, organisation of regional astronomy Olympiad and participation to international astronomy Olympiads, conducted astronomy classes for two universities without astronomy departments and for two middle schools, organisation of weekly astronomy club for middle school students and of astronomy schools during each Summer and Winter holidays, publication of the *Amateur Astronomer* magazine, and cooperation with other societies and associations also located at the Planetarium (Beijing Extracurricular Education Association, Planetarium Working Committee of the Chinese Associations of Natural Science Museums, and Beijing Astronomical Society).

2. Activities for 2009 IYA

The announcement of the 2009 International Year of Astronomy by the United Nations was definitely a great opportunity for astronomy education. Together with all the aims and projects of global IYA activities, some specific aspects are emphasized for China-Nanjing IYA activities: (1) promotion of astronomy education in primary and middle schools; (2) encouragement for both professional and amateur astronomers to involve in astronomy activities; (3) cooperation with all kinds of media for astronomy propagation.

The popularisation and observations for the July 22, 2009 total solar eclipse was definitely the largest national 2009 IYA event for China. Being the longest duration total solar eclipse in this century, it is also the first one which passed over densely populated and fast developing areas. It is estimated that approximately 0.3 billion Chinese people underwent the full darkness period of the total eclipse, and all the country was aware of a partial eclipse. It was an urgent and very important task to have the event known by as many people as possible, to decrease or avoid the possible eye sickness by incorrect way of solar observation and the possible problems with traffic accidents and security issues from the sudden darkness in seconds or minutes within the total eclipse belt area. Accurate information related with solar eclipse was well-prepared and given to all media before the event and also be spread in the system of national science and technology associations, and some official participations and actions from all level of the government were also necessary and very important.

During the global IYA project *100 hours of astronomy* on April 2-5, 2009, lectures, exhibits, and side-walk observations were performed. All Chinese astronomical facilities were opened for visits by the public on April 5. The 2009 National Astronomy Olympiad was also held during April 1-5 in Guangzhou. Similar side-walk astronomy events including telescope observation, lectures, and exhibits were also planned for July 12-21 before the total solar eclipse and for August 21-27 around the traditional Qixi Festival (July 7 on lunar calendar).

The types of side-walk astronomy with some combination of telescope observation, lectures, exhibits are advocated to all amateur and professional astronomers and telescope vendors and were performed not only during the above 3 periods, but also during the whole year, in at least 100 towns and 100 universities.

Dark Skies Awareness activities were scheduled on March 28 (global event) and August 22 (Asian regional). Observation campaigns on mutual phenomena of planets and satellites were carried out, as well as observations for meteor showers on some certain periods of time during.

The local IYA opening ceremony for mainland China was successfully performed on January 10 at Beijing Planetarium. A separate celebration for IYA was held in late April in Beijing, and a closing ceremony in December.

Universe Awareness activities focused on children started on June 1. Training of primary and middle school teachers was carried out from different systems, mainly under the national *HOU* system. Forum on *Astronomy Education* and the yearly *Star Party* were taken together with other IYA activities. A survey on small observatories (mainly in schools) and a survey on planetariums started as IYA events and were completed before the end of the year.

Formal astronomy press releases on certain dates of each month from February 2009 at Beijing Planetarium, to media and also to general public, with introductions to new discoveries in astronomy in past month, observable celestial phenomena in the coming months, and new progress on both of domestic and international IYA activities. An additional issue of the *Amateur Astronomer* magazine on IYA was published, and also

a specific column on IYA in each issue of the magazine in 2009. Educational books on astronomy were likewise published during 2009 IYA.

The traditional bi-yearly astronomy photograph competition organized by the *Popularisation Working Committee* was performed in 2009 as an IYA event, together with other competitions like *Essay on Astronomy and IYA*, *Astronomical Education Writings by Professional Astronomers*, etc.

The successful organisation of these activities involved lots of efforts. Participation from volunteers was very important. A database on IYA volunteers was designed and will be in function for the next years.

Some other activities are still on investigation and may be performed later, like gathering recommendations from young students on asteroid naming, constructing a certification system for night sky observers, etc.

All the information about IYA activities in mainland China can be obtained and discussed at the official 2009 IYA website at <http://www.astronomy2009.org.cn>.