

## COMMISSION 46: TEACHING OF ASTRONOMY (ENSEIGNEMENT DE L'ASTRONOMIE)

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### 1. INTRODUCTION

Commission 46 is a commission somewhat out of the ordinary and can in some ways be considered as an extended arm of the Executive Committee of the IAU. National Committees or Adhering Bodies in each member country nominate one person per country to be the national representative to the Commission. The National Representative maintains liaison between the Commission and the home country, writes a national triennial report on the development of astronomy education and votes on financial matters. Other IAU astronomers, with a special interest in education, can become regular individual members of the Commission. Non-IAU members can be invited by the Commission to serve for one triennial term, this is renewable.

That Teaching of Astronomy is becoming fashionable is witnessed in many recent activities, such as for example the first IAU Colloquium (#105) entirely devoted to this topic. Many workshops all over the world are also activating society (the astronomical as well as the general) to apply the significant role that astronomy can play in improving science literacy (see e.g. "An Education Initiative in Astronomy" available from R. A. Brown, Space Telescope Science Institute, Baltimore, MD 212218, USA). The International Space Year 1992 can become an important vehicle for astronomy dissemination.

Commission 46 considers that one of its major duties is to contribute to the rise of astronomy in the developing countries. The International School for Young Astronomers, the Visiting Lecturers Program, the Travelling Telescope, and the new Astronomy Education Material are examples of such activities administered by the Commission. Each of these items is discussed in more detail below.

### 2. INTERNATIONAL SCHOOL FOR YOUNG ASTRONOMERS (ISYA)

One of the most important activities of the Commission is the International School for Young Astronomers (ISYA, J. Kleczek) which is held twice during each triennial period. The dominant goal of ISYA is to advance astronomy in astronomically developing countries. This is accomplished by increasing the visibility of astronomy in the host country, creating science and astronomy infrastructure by seeking lecturers and participants from physics within the country as well as from abroad. The isolation of individual participants is broken down by ISYA, partly through its socializing activities and its stipulation that participants must come from several neighbouring countries. The XVIth ISYA was held from August 2 to 19, 1989 in Cuba at the Instituto Superior Pedagógico, Holguin. Ten professors, of which five came from Cuba, held lectures for 55 participants, of which 32 came from Cuba. The XVIIth ISYA was held from May 28 to June 15, 1990 in Malaysia at the Institute of Physics of Malaysia at the Marine Academy, Melaka. Eleven professors held lectures for 27 participants, of which 16 came from Malaysia. The Malaysia ISYA was the first to make use of the Travelling Telescope.

### 3. VISITING LECTURERS PROGRAM (VLP)

The Visiting Lecturers Program is designed to support and consolidate programs at an institution in a country newly entering into astronomical work. The coordinator of the VLP is D. G. Wentzel. Two VLPs are in progress at the moment, in Peru and Paraguay, with J. Sahade as the chairman of the organizing committee. The Peru VLP offered courses in Solar Physics by J. I. Garcia de la Rosa from Spain during the first part of 1989 and in Astronomical Optics by L. C. Martorelli from Argentina in the second half of 1990. It is hoped that a workshop in optics will be established. Two graduate students spent some time in Argentina doing work for their Licenciatura degree. The Paraguay VLP offered courses in General Astrophysics by E. R. Pishmish from Mexico during the first part of 1988, in Radioastronomy by M. C. Martin from Argentina during the second part of 1988, in Extragalactic Astronomy by J. L. Sersic from Argentina during the second part of 1989 and in Problems for Radioastronomy by C. Olano from Argentina during the second part of 1990. Plans for a third VLP in China have been somewhat protracted due to events in China, but an organizing committee has been set up which is chaired by W. N. Christiansen.

### 4. THE TRAVELLING TELESCOPE (TT)

The Travelling Telescope (TT) is a project of Commission 46 whose purpose is to provide astronomers, teachers and advanced students in the developing countries with practical training and experience in astronomy. It consists of a Celestron-8 telescope, instruments and accessories, in sturdy wooden shipping crates. The TT concept was developed by D. McNally and R. West in 1984, and publicized through IAU Commission 46. Funding was obtained by J. Percy (who is the project coordinator) from the Canadian Commission for UNESCO. The TT was exhibited at IAU Colloquium #105 and at the IAU General Assembly in Baltimore in 1988, though it was not fully ready for use at the time. Nevertheless, it received valuable publicity, further donations of material, and useful comments.

The TT is to be used primarily in conjunction with ISYA and VLP. The TT's first assignment was to have been the ISYA in Cuba in 1989 but, due to logistics and funding problems, this was not possible. The TT was, however, able to travel to the 1990 ISYA in Malaysia, thanks to the generosity of Air Canada, which transported the TT and its supervisor (D. Bruckner) free of charge. The TT suffered from several technical problems, but this was expected, and it will be two or three years before it can travel dependably on its own. Applications for use of the TT should be sent to the President of IAU Commission 46.

### 5. NEWSLETTER

The Commission publishes a newsletter approximately twice a year, which is mailed to about 500 addresses throughout the world. Between July 1987 and June 1990, the following issues were produced: #22 (June 1987), #23 (January 1988), #24 National Reports (April 1988), #24A National Reports Continued (September 1988), #25 Astronomy Education Material Part C: Material in Languages Besides English and Slavic (April 1988), #25 Addendum (Undated), #26 Astronomy Education Material Part A: Material in English (November 1988), #27 (January 1989), #28 (August 1989) and #29 (February 1990). Regular issues were edited by J. Percy; the National Reports were edited by L. Houziaux and C. Iwaniszewska; the Astronomy Education Material was edited by R. Robbins (Part A) and M. Gerbaldi (Part C). All issues were produced and mailed by L. Houziaux. A continuing problem with the Newsletter has been the lack of suitable contributed material. The Newsletter welcomes any short items on astronomy

education which would have a wide international audience. These should be sent to Professor John R. Percy, Erindale Campus, University of Toronto, Mississauga, Ontario L5L 1C6, Canada.

#### 6. ASTRONOMY EDUCATION MATERIAL (AEM)

Every three years, since 1970, the Commission has published the Astronomy Education Material (AEM), which consists of large lists of books, atlases, magazines, lecture notes, films and slide sets, etc. in many languages from all over the world. At the Baltimore meeting in 1988, it was decided to strongly curtail these lists and limit the languages surveyed, since the usefulness of AEM had been questioned by many of the Commission's national representatives. It was proposed to publish only selective lists in English (Part A, R.R. Robbins), Russian (Part B, C. Iwaniszewska), French (Part C, M. Gerbaldi) and Spanish (Part D, J. Fierro). In addition, emphasis should be placed on material of special interest to developing countries. The AEM will continue to be published in the Commission Newsletter.

#### 7. IAU COLLOQUIUM #105 "THE TEACHING OF ASTRONOMY"

IAU Colloquium #105, sponsored by Commission 46, was held at Williams College Williamstown, Massachusetts, USA 26-30 July 1988. There were 162 astronomers from 31 countries in attendance. The Proceedings – "The Teaching of Astronomy" – were edited by J. M. Pasachoff and J. R. Percy, and were published in 1990 by the Cambridge University Press (ISBN 0-521-35331-9). Major topics covered were curriculum, astronomy and culture, the teaching process, student projects, computers, textbooks, teaching aids and resources, conceptions/misconceptions, planetariums, and developing countries. The opportunity to gather such a diverse group of participants for the four days of papers, panels and discussions provided a valuable step toward worldwide interchange of ideas and experiences about the teaching processes, and should be repeated at intervals.