

Report on
International School for Young Astronomers (ISYA)
in Egypt, September 18 - October 8, 1994

The 21st ISYA took place in Egypt, the first and third weeks at Cairo University and the second week at Kottamia Observatory, located in the desert some 85 km east of Cairo. Egyptian sponsors were the Academy of Scientific Research and Technology, the Ministry of Scientific Research, the National Research Institute for Astronomy and Geophysics (NRIAG, Helwan), Cairo University, and the Ministry of International Cooperation. The Director of the School, Prof. R. A. Ghobros, was aided by a Local Organizing Committee in which Drs. S. M. Hassan and M. I. Wanas were particularly active.

Four foreign faculty were invited: Dr. Jayant Narlikar (IUCAA, India, cosmology), Dr. Giuseppe Longo (Osservatorio di Capodimonte, Italy, photometry of galaxies), Dr. Michele Gerbaldi (assistant secretary of ISYA, Institut d'Astrophysique, Paris, stellar spectra), and Dr. Donat G. Wentzel (secretary for ISYA, University of Maryland, USA, solar physics / MHD). Drs. Narlikar and Longo each could stay only one week (the latter due to illness); nevertheless, both established excellent rapport with the participants. After several last-minute changes, the Egyptian faculty were Dr. M. I. Wanas (cosmology), Dr. Mohammed Samir Abu El-azm (spectroscopy on the 74-inch telescope), Dr. A. I. Basuni (variable stars and photometry on the 74-inch telescope), and Dr. S. M. Hassan (star clusters and galactic structure). Guest lecturers (little contact with the participants) were Dr. S. Yousef and Dr. A. Galal (solar observations, Yousef also solar-terrestrial relations), Dr. F. Mahmoud (variable stars) and Dr. F. Mikhail (cosmology). The emphasis throughout ISYA was on providing a broad view of astronomy and the related physical sciences.

There were 35 applications (including only 5 from Africa and only 3 women) within ten days of the deadline. The facilities at Kottamia limited us to inviting 14 foreign participants. We invited 14 (including 2 women) from 14 countries, but only 12 came, from Zambia, Nigeria, Algeria, Libya, Bulgaria, Slovakia, Uzbekistan, Azerbaijan, Ukraine, Russia, Greece, and Vietnam. (One person from Zimbabwe accepted the invitation but did not appear; one from Iran could not obtain a visa to Egypt.) The participants ranged from a student with a recent BSc and observing experience to a few doctoral students and one PhD. Since all Egyptian participants live in Cairo, their number varied greatly, with some lectures reaching an attendance of about 70. In the end, 29 Egyptians (including 8 women) were deemed to have been active participants and received a certificate. They were mostly from NRIAG and mostly at the MSc level.

The participants on average had a better preparation in both science and ability to speak English than for the last several ISYA. This allowed the scheduling of participants' talks on cosmology already during the first week while Dr. Narlikar was

present, with simultaneous very active discussions on solar physics in one group and stellar physics in another. Dr. Hassan also turned some of his lectures into discussions. This led to flourishing scientific discussions during tea breaks much earlier than in the last several ISYA. Also, already during the first week, at least 4 Egyptian participants were ready to ask the foreign faculty well formulated detailed questions. By the third week, many of the Egyptian participants got involved in discussion with the foreign participants and some even spoke English to each other. The textbooks brought by the foreign faculty were read eagerly. There was much discussion about acquiring data from abroad and international collaborations. Dr. Longo used his visit to finalize the visit of two Egyptian students in Italy. The foreign faculty gained the impression that the Egyptian students feel the strong need to expand their horizons and the available communication facilities. Although the ISYA was planned mostly by fax, the Egyptians are expanding their capabilities in e-mail.

The official schedule of the ISYA consisted of 14.5 days with normally three lectures (60 - 90 minutes) per day followed by either organized discussions, or brief talks by the foreign participants about their institutions, or participants' talks about their research aimed at all the participants (6 foreign and 3 Egyptian talks). There were two observing projects using the 74 inch telescope, each spread over two nights (about 10 participants each). The spectrum observations were followed by a half day of data reduction and vigorous discussion. Fridays, two Saturdays and a Thursday (a national holiday) were used for an excursion to NRIAG, cultural sightseeing in and around Cairo, moving to and from Kottamia, and an excursion to Ismailia and the nearby part of the Sinai.

The IAU supported the ISYA's travel expenses: about \$3000 for foreign faculty, \$9700 for foreign participants, and \$4800 for local transportation, a total of about \$17500, about 20% less than allocated by the IAU budget. Local transportation included not only daily transport in Cairo and excursions but also daily transport during one week from Cairo to Kottamia of food, water and some of the Egyptian participants. The IAU made the budgeted funds available before the ISYA, which allowed not only the refunding of all travel expenses during the ISYA but the required payment of local transportation charges on a current basis. The Egyptian costs for hotel in Cairo, meals and meeting costs were slightly larger than the costs supported by the IAU.

Given the sites selected for all recent ISYA, changes in plans must be expected after the time of the proposal to the IAU Executive Committee. For this reason, the ISYA secretary and the president of Commission 46, charged with approving final plans, need to identify early one individual who can carry the plans through any and all crises. In this case, the university calendar changed and precluded housing at Cairo University. But Dr. Ghobros found a suitable hotel near to both the University and the center of Cairo. Dr. Hassan admirably took care of the many details that become

necessary on short notice during an ISYA. In Kottamia this involved the uncertain time of arrival of the daily bus from Cairo bringing some participants, some faculty, and the main meal of the day. Particular effort was needed to arrange distribution of copies of lecture transparencies before the end of the ISYA (since several participants have practically no mail service). The end result was an ISYA that, as some participants said, left the participants with a more creative outlook on astronomy. Thanks go to Drs. Hassan and Ghobros for making this possible.

Donat G. Wentzel
Secretary for ISYA
November 1, 1994

Review of ISYA in Egypt (Cairo and Kottamia) during 18 Sep. - 8 Oct. 1994, by D. Wentzel

Of 12 foreign participants, 6 responded to a survey in Nov. 1998, 2 are otherwise known.
Of 29 Egyptian participants, 5 responded to a survey during May 1999 *.

In Brief: 9 of the 13 indicate successful progress in astronomy, 5 of these strongly influenced by ISYA. Faculty G. Longo and about 6 participants kept in contact for at least two years.

The following items are ordered in terms of expressed ISYA influence. Comments in quotes are paraphrased.

Russian participant : was and is “software programmer”, now deeply involved in optical observations of pulsars (with papers given at two international meetings). “ISYA affected my life greatly; ...my self-confidence was too low; ISYA made possible my return to astronomy (after several years outside)... I think my career of observer would not be successful if I did not listen to Dr. Gerbaldi’s lectures.”

Ukrainian participant : PhD on asteroids, Kiev 1996; now head of software group in Ukraine (mainly US supported) working on applied problems like cosmic ray interactions with solids in space, algorithms for astronomy and remote sensing ; working on US supported project on manufacturing of novel-type mirror. “ISYA strengthened my motivation to do astronomy..... unforgettable lectures of Giant (sic) Narlikar numerous discussions with G. Longosuggest more participants’ oral presentations..... realize the international nature of astronomy”. (Comments similar to the last made also by others).

Vietnamese participant: now head of astronomy program within physics department at Hanoi Pedagogical University. “It was ISYA that enabled me to be head of Hanoi observing station and astronomy teacher I understand better the importance of teaching and researching astronomy in the developing countries.”

Three Egyptian participants are now studying abroad:

One is now a PhD student in Japan, dynamical astronomy. “ISYA was starting point for many scientific contacts” .

One is a PhD student at Cairo University, interacting galaxies, currently on two-year leave with Longo in Italy for observational experience; has permanent position as research assistant at NRIAG and Kottamia telescope. Longo advised on MSc project and suggested PhD project.

One is still officially control engineer at Helwan Observatory, but currently PhD student in Prague studying modern (A.I. etc.) techniques for control systems of astronomical telescopes.

Zambia participant : was and is faculty in physics department, thanks to ISYA better able to introduce astrophysics ; founded a university-related amateur astronomy club; currently (May 1999) on leave for doctoral work in Holland.

Egyptian participant : obtained Cairo University PhD in 1995, in celestial mechanics; now is lecturer in astronomy, Cairo University. “I learned to be confident in myself”. Scientific correspondence with Gerbaldi.

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Azerbaijani participant : had PhD before ISYA; now is senior research worker, nonthermal radiation from supernova remnants. "High value of giving talk in English." (Similar comments from others.) "Gerbaldi's lectures were very effective for me; Wentzel's lectures were novelty in teaching astrophysics". Suggests increased emphasis on currently newsworthy topics.

Algerian participant: now teaching assistant and PhD student in physics

Egyptian participant : was and is research assistant at NRIAG (photoelectric binary observations) . "ISYA got me started toward more accurate data reductions."

Greek participant : received PhD just before ISYA, later 2 yr. post-doc in France (N-body simulations), ½ year grant in Greece, now (Dec. 1998) jobless. " Kottamia has been my first and last observing ... I valued the participants' range of countries, from low to high astronomy development".

Uzbekistan participant : left astronomy

* Interpretation of the high number of non-responding Egyptian participants: 17 of the Egyptian non-respondents have group e-mail addresses, 15 at NRIAG, 2 at U. Cairo. This suggests that they are still staff members and/or students. Unfortunately, the Egyptian participants ranged from the very sincere ones, who even came from Cairo to Kottamia daily for a week, to those who merely attended a few lectures and enjoyed the free lunches in Cairo. The Egyptian faculty drew the line at 29 participants who should receive certificates for attending ISYA. The non-response suggests that far fewer than 29 really participated.

Donald J. Wentzel
May 26, 1999

IAU

INTERNATIONAL ASTRONOMICAL UNION International Schools for Young Astronomers

Donat G. Wentzel, Secretary

Dr. I. Appenzeller
IAU General Secretary
98 bis Blvd Arago
F 75014 Paris

November 9, 1994

Dear Immo:

I enclose for the ISYA in Egypt:

- 1) an academic report (a shorter version of which will appear in the IAU Bulletin);
- 2) a financial report including receipts and an accounting by Prof. Ghobros for the IAU funds spent in Egypt; I shall refund Sfr. 6031 to the IAU account in Switzerland;
- 3) a list of participants and their addresses; and
- 4) a copy of the certificate given to the participants.

I hope this is all satisfactory.

Sincerely yours



Donat G. Wentzel

ISYA - EGYPT

Sept. 18 - Oct. 8 1994

Address list for foreign participants + list of Egyptian participants

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PARTICIPANTS
ISYA - EGYPT 1994
 18 Sept. - 8 Oct.

I) National Research Institute of Astron. & Geophysics (NRIAG) :

	A. E. Al-Said .	(M.Sc.)	Mr.
	G. B. Ali .	(M.Sc.)	Mr.
9	S. S. M. Saad .	(M.Sc.)	Miss
	N. S. Abdul Motteleb .	(Graduate)	our wife Miss
	A. Abdul - Wahab .	(Graduate)	Mr.
	E. A. Ibrahim .	(")	Mr.
	A. L. Tawodros .	(")	Mr.
3- 5	A. A. Shaker .	(")	Mr.
	I. M. Youssef .	(")	Mr.
0- 9	A. A. Ateia .	(")	eng Mr.
	M. I. Nouh .	(")	Mr.
	Naser M. Ahmed .	(")	Mr.
0- 6- 8	Abdul Nabi Saad .	(Graduate)	Mr.
	Y. A. Azzam .	(graduate)	Mr.
	F. M. Reda .	(")	Miss.
	A. H. Hassan .	(M.Sc.)	Mr (?)
	S. M. Ahmed .	(M.Sc.)	Miss
	A. Abdullah Mohamed .	(Graduate)	our Miss
	O. M. Fikry .	(M. Sc.)	Mr.
0 4	S. Mostafa Amin .	(Graduate)	Miss (Mrs)
1-	M. Mahrous El Khatib .	(")	Mr.
2-	M. Salah Khasem .	(")	Miss
3-	El - Hassan I. Ibrahim .	(M.Sc.)	Mr.
4	A. A. ...		Eng

II) Cairo University : (Astron. & Met. Dept.).

- 1- ^{Anal} M. Hamafy. (M.Sc.) Miss
- 2- Morsy Abdul Azim. (M.Sc.) Mr.
- 3- D. El-Dim Fawzy. (M.Sc.) Mr.
- 4- F. Ahmed Abdul - Salam. (graduate) Mr.
- 5- R. Hussein Mohamed. (graduate) Mr.

III) Al - Azhar University (Dept. Astron.)

- 1- A. Ahmed Ibrahim. (graduate) Mr.

* M.Sc.: Has already got his degree and in the phase of preparing for his Ph.D.

Graduate : In the phase of preparing his M.Sc. .

A Total of ²⁹~~30~~ Egyptian Participants.

8 Mrs .

21 Mr.



IAU, ISYA - EGYPT

1994

Academy of Scientific Research & Technology

NRIAG

CAIRO University



The 21st international School For Young Astronomers

18 Sept. - 8 Oct. 1994

CERTIFICATE OF PARTICIPATION

has participated in the ISYA held in Cairo - Egypt, sponsored by IAU, Academy of Scientific Research and Technology, National Research Institute of Astronomy and Geophysics, Ministry of International Coop. and Cairo Univ. ; organized by National Committee of Astronomy and Dept. of Astron. & Meteorology, Faculty of Science, Cairo University.

Director of the School

(Prof. Dr. R.A. Ghobros)

IAU - ISYA Secretary

(Prof. Dr. D. Wentzel)

Donat G. Wentzel
Via Collina 77
CH 6612 Ascona
July 23, 1994

Dear Monique:

For this ISYA in Egypt, I am willing to be treasurer for the entire ISYA. If this is OK for the IAU, please do transfer CHF 30,000 to my account UBS Ascona 340 103.08E. I shall provide a suitable accounting after the last bill has been received (probably Cairo University).

However, I wish to note:

- 1) This has no implications for subsequent ISYA,
- 2) The mingling to this extent of IAU business money with my personal money is not considered good business practice. [Really the IAU should have a treasurer.]

Have you received the bill from IVCAA for the India ISYA? Has it been paid? I worked it out while in India, but I did not receive a copy of the bill that was airmailed to me. In case payment awaits my approval, please send me a copy of the bill.

Sincerely

Donat G. Wentzel