

Report on the  
XIIIth International IAU-UNESCO School for Young Astronomers  
Cairo, August 22 - September 9

The School started with an Opening Ceremony on August 22 morning at the Academy of Scientific Research and Technology. Prof. Dr. I. G. Badran, President of the Academy, opened the School and welcomed all the participants and guests. Addresses of the School Director and Secretary followed.

Lectures were held at the Faculty of Science, Cairo University. Students were accommodated in the University hostels. Meals were prepared at the National Sport Club.

Together 28 students participated ( see Encl. 1 ). Altogether 22 lecturers gave lectures or seminars on various topics of astronomy, utilization of solar energy and remote sensing ( Encl. 2 ). Students themselves gave seminars ( short talks ) on the subject of their research or interest.

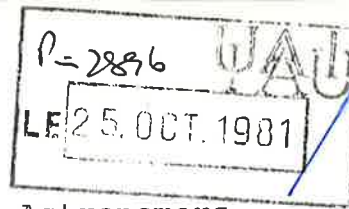
In free time excursions were organized into various scientific institutions and historical places ( for programme see Encl. 3 )

In our opinion the School fulfilled its both aims. The students had the possibility to learn both the basic knowledge as well the modern achievements of astronomy and they went through practical exercises solving by themselves various problems. Equally important was the personal contact among all the participants ( students and lecturers as well ). Plans for cooperation in future were discussed.

The School ended by Closing Ceremony on Sept. 9 evening.

*Prof. Kerezh*  
Secretary of the School  
Encl. 1 <sup>opening address</sup> List of students  
2 List of lecturers  
3 List of lectures  
4 Daily programme  
5 Certificates of attendance

*A. S. Asaad*  
Director of the School



Report on Summer School for Young Astronomers  
held in Egypt, Aug. 22 to Sept. 9, 1981

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There were four Lecture Sessions each day: 0800-0930; 1030-1200; 5.00-6.30; and 730-900p.m. The main courses and the Lecturers were as follows :

Solar Energy	Prof. Kleczec
Solar Physics	" "
Matter and Energy	" "
Planetary System	Prof. Asaad
Galactic dynamics	" "
Practical Training	Prof. van Helden
Stellar Structure	Dr. Aiad
Telescopes	" "
Astronomical Concepts	Dr. Osman
Interstellar matter	Dr. Issa
Stellar Atmosphere	Dr. Ghobrous
Ancient Egyptian Astronomy	Dr. Sadek
Space Research	Prof. Moutsoulas
Solar Energy in Egypt	
Cosmology	Prof. Mechael
Problems in Astrophysics	Dr. Wanas

etc.

During the Summer School the participants visited the following places

- |                        |                              |
|------------------------|------------------------------|
| (1) Egyptian museums   | (2) Kottomia Observatory     |
| (3) Helwan Observatory | (4) Giza and Sakara Pyramids |
| (5) Gulf of Suez       | (6) Alexandria               |

etc.

A lot of work was put into the organization of this Summer School and the lectures were successful in imparting considerable astronomical knowledge. Students had good opportunities to meet each other and to learn about Egyptian culture and history. The Summer School is a valuable aid to young astronomers.

Some suggestions for the future would include :

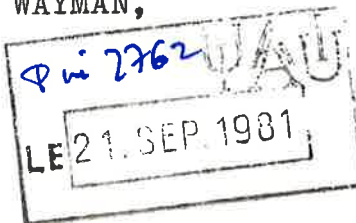
1. When the weather is hot, as it was in Egypt, it is important that the programme of lectures should not be too crowded - some of the students were too tired to attend all the lectures.
2. The concept of Punctuality should be emphasized to the students at the beginning of the Summer School. Considerable time was wasted this year in waiting for unpunctual participants, who held all of the other students up.

Cheng Fuhua

15.9.1981.

Professor Dr. Patrick WAYMAN,  
IAU General Secretary  
IAU - UAI  
rue de l'Observatoire  
PARIS  
France

10-9-81



Dear Dr. Wayman,

The XIIth School has finished. Enclosed please find the report on the School with list of students, list of lecturers, list of lectures and scheme of daily programme. The programme was sometimes changed, according to circumstances.

The financial part of the report will be prepared as soon as professor Asaad, Director of the School, will have received all necessary data.

Thank you very much for all your support and please excuse us for troubling you and Mrs. Manning.

With best regards

Yours

Encl. Report, List of participants,  
List of lecturers, Daily programme

*A.S. Asaad*  
*Joseph Kleezel*

Copy sent to Wentzel to Nairobi, to facilitate his preparations of the Kenya School next year. He visits Nairobi in October this year.

Helwan

XII IAU- UNESCO School For Young astronomers  
Cairo 22 Aug. - 9. Sept. 1981

List of young participants

I- China

- (1) Mr. Cheng Fuhua  
Astrophysics Research Division, University of  
science and technology of china,  
Hefei Anhui Province,  
china.

II- Egypt

- (2) Mr. M.M. Abul Futuh B.Sc. Astronomy  
Astronomy Dept, Faculty of Science, caibo  
University, Cairo, A.R.E.
- (3) Mr. M.A. Amir Astronomy Student  
Astron Dept, Faculty of Science, Cairo University  
Cairo, A.R.E.
- (4) Mr. G.F. Attia B.Sc. Physics- Mathematics  
Helwan observatory, Helwan, A.R.E.
- (5) Mr. H. Azmi Engeneur Student  
Faculty of Electronic Engeniring, Menoufia  
University, A.R.E
- (6) ~~Mr. M.S. El Nawawy B.Sc. Astronomy~~ *Mr. A. Sadik*  
~~Astronomy Dept., Faculty of Science,~~ *Cairo Museum,*  
~~cairo University, Cairo, A.R.E.~~ *Tahrir, Cairo,*  
*A.R.E*

- (7) Mr. M. Beheary                      B.Sc. Astronomy  
Helwan observatory, Helwan, A.R.E.
- (8) Mr. F. M. Eid                      M.Sc. Oceanography  
Department of oceanography, Alexandria University,  
Alexandria, A.R.E.
- (9) Mr. M.A. El shalaby              M.Sc. Astronomy  
Astronomy Dept. Faculty of Science, Cairo University,  
Cairo, A.R.E.
- (10) Mr. M.A. Hanna                      B.Sc. Physics- Mathematics  
Helwan observatory, Helwan A.R.E.
- (11) Mr. Y.S. Hanna                      BSc. Physics - Mathematics  
Helwan observatory, Helwan, A.R.E.
- (12) Mr. S.A. Ibrahim                      M.Sc. Physics  
Dept. of physics, Faculty of Sciences,  
Alexandria University, Alexandria; A.R.E
- (13) Miss. N.M. Khalil                      B.Sc. Astronomy  
Astronomy Dept., Faculty of Science,  
cairo University, Cairo, A.R.E.
- (14) Mr. A.B. Morcos                      M.sc. Astronomy  
Helwan observatory, Helwan, A.R.E.
- (15) Mr. M.A. Rassem                      M.Sc. Astronomy  
Astronomy Dept., Faculty of Science,  
cairo university, Cairo, A.R.E.
- (16) Mr. E.S. Sabah M                      M.Sc Physics  
Physics Dept., Faculty of Sciences,  
Alexandria University, Alexandria, A.R.E.

- (17) Mr. A.A. Salama                      Medicine Student  
Faculty of Medicine, Cairo University,  
Cairo, A.R.E.
- (18) Mr. O.M. Shalabia                      Astronomy Student  
Astronomy Dept, Faculty of Sciences,  
Cairo University, Cairo, A.R.E.,

III Greece

- (19) Miss E. Antonopoulou                      Ph.D Astronomy  
Dept. of Astronomy, University of Athens,  
Athens, Greece
- (20) Mr. E. Theodossiou                      M.Sc. Astronomy  
Dept. of Astronomy, University of Athens,  
Athens, Greece.

V- Holland

- (21) Mr. S. Van Helden                      high school student  
Zeist, Holland

V - Hungary

- (22) Mrs L. Gesztelyi                      M. Sc Astronomy  
Heliophysical Observatory, Hungarian Academy of Sciences,  
Debrecen Hungary .

VI . Malto

- (23) Mr. A. Gott                      B. Sc.  
13, Stuart Street , Gzira, Malta

VII. Nigeria

- (24) Dr. L. B. Kolawate                      Ph. D. Physics , University of Ife  
Ife - Ifa, Nigeria
- (25) Mr. D.R.N. Awachie                      M. Ph. Physics  
Dept. of Physics, University of Nigeria, Nsukka, Nigeria

IV . Holland

IV - Holland

(26) Mr. S. Van Helden High school student  
Zeist, Holland

VIII - Portugal

(26) Mr. I.D. Sim<sup>o</sup>ns M. Sc.  
Astronomical Observatory, C P I47  
3002 coimera Codex, Bortugal

IX - Sudan

(27) Mr. B. A Abdel Rahman Ph.D. Physics  
Faculty of Education, University of Khartoum,  
Khartoum, Sudan

(28 ) Mr. M. A Bakheit Ph. D. Physics  
Faculty of Education , University of Khartoum,  
Khartoum, Sudan.

XIIIth IAU-UNESCO School for Young Astronomers

Cairo, Helwan Observatory, Kottamia Observatory

August 22 - September 9, 1981

List of Young Participants:

- China: ✓ Mr. Cheng Fuhua (young Chinese astronomer visiting IRE  
Egypt: ✓ Mr. A. A. Amir astronomy student  
✓ Mr. G. F. Attia MSc  
✓ Mr. M. Beheary MSc  
✓ Mr. M. A. Hanna MSc  
✓ Mr. Y. S. Hanna MSc  
Miss N. M. Khalil MSc  
Mr. A. A. Khalil MSc  
Mr. K. I. Khalil MSc  
✓ Mr. ~~M. M.~~ Khalil MSc  
✓ Mr. A. B. Marcos MSc  
Mr. M. S. Nawawy MSc  
✓ Mr. M. A. Rassem MSc  
Mr. M. N. Said MSc  
✓ Mr. O. M. Shalabia astronomy student  
Greece: ✓ Miss E. Antopoulous astronomy student  
Mrs M. Tsoga "  
✓ Mr. E. Theodossiou "  
Hungary: ✓ Mrs L. Gesztelyi MSc  
Nigeria: ✓ Mr. R. I. Awachie BSc  
Portugal: ✓ Mr. I. D. Simoes MSc  
Saudi Arabia: Three young astronomers from Ryad University -  
their names not yet received  
Mr. M. A. Massari PhD  
Mr. F. A. Fotouh PhD  
Sudan: Mr. B. Abdalla PhD  
✓ Mr. M. A. Bakhit PhD Head of Physics Dept.  
Mr. M. Shaddad PhD lecturer in Physics  
Tanzania: Mr. M. G. Bilal PhD Senior Lecturer in Physics

MMA Futah Cairo  
A Azim Monofra  
FM Eid Alexandria  
El Shalaby Cairo  
Ibrahim, Alagaha

Mr NM Khalil  
AA Salama  
Sivan Kellen, Kottamia  
A Gott Malta  
Kolawole Nigeria  
A Palma, Sudan



XIith IAU-UNESCO School for Young Astronomers

Cairo, Helwan Observatory, Kottamia Observatory

August 22 - September 9, 1981

List of lectures and lecturers

Space Research	8 hours	M. Moutsoulas
Matter, Energy and Universe (Introduction)	6 h	J. Kleczek
Planetary System	3 h	..... (.Egy)
Solar Physics	6 h	J. Kleczek
Spherical Astronomy	3 h	M. I. Wanas
Stellar Astronomy ( Basic Concepts )	4 h	A. I. Osman
Stellar Atmospheres	4 h	R. Ghobrous
Stellar Interior	4 h	A. Z. Aiad
Stellar Systems	4 h	A. S. Assad
Galactic Astronomy	3 h	A. I. C. Eldin
Cosmology	3 h	F. Mechael

Practical Part:

Observational Techniques in Astronomy	7 h	J. Meaburn
Practical Training in Astronomy	20 h	R. van Helden
Practical Observations at Kottamia	16 h	H. Mahdy B. A. Essa S. Nawar
Utilization of Space Research in Developing Countries	4 h	M. Moutsoulas
Sun in the Service of Mankind	4 h	J. Kleczek
Utilization of Solar Energy in Saudi Arabia	4 h	M. A. Nassari
Utilization of Solar Energy in other Countries	4 h	F. A. A. Poto

Seminars and talks by young astronomers ( number of hours will be fixed after discussion with young participants )

IAU - UNESCO School for young  
Astronomers Cairo Aug. 22 - Sep. 9 1981

List of Lecturers

- I - A. Z. Aiad :  
Astr. Dept. , Faculty of Science, Cairo University,  
Cairo, A. R. E.
- 2 - A. S. Assad:  
Helwan Observatory, Helwan, A. R. E.
- 3 - A. G. Eldin  
Helwan Observatory, Helwan, A. R. E.
- 4 - M. Ella  
Helwan Observatory Helwan, A. R. E.
- 5 - G. Ghobrous:  
Helwan Observatory , Helwan , A. R. E.
- 6 - K. Hamal  
Polytechnical school, Prague, Czechoslovakia
- 7 - I. Hiccs  
Imperial College, London, England
- 8 - I. A. Issa  
Helwan Observatory , Helwan, A. R. E.
- 9 - M. Kamal  
Dept of Astronomy , Faculty of Science, Cairo Univ. A. R.E.
- 10- Staff of the Center (Head M. Abdel Hady)  
Center of remote Sensing . Academy of Science and  
technology, <sup>101 Kasser el Any Str.</sup> Cairo, A.R.E.
- II- J. Kl<sup>e</sup>czek  
Astronomical Institute, Ondrejev, Czechoslovakia
- I2- F. Michael  
Dept. of Mathematics, Faculty of Science, Cairo, A.R.E.
- I3- M. Moutsoulas  
Dept. of Astronomy, University of Athens, Greece.
- I4-S. Nawar  
Helwan Observatory, Helwan , A.R.E.
- I5- A. I. Osman  
Helwan Observatory, Helwan, A.R.E.
- I6- H. Ragab  
Director of the Papyrus museum, Cairo, A.R.E.

- I7 - A. Sadek  
Cairo Museum, Tahrir, Cairo, A. R. E.
- I8 - D. Siel  
Cultural Council, Alexandria, Cairo, A.R.E.
- I9 - R. Van Helden  
Astr. Dept., University Utrecht, Holand.
- 20 - T. Verbalovich  
Scientific Council of the U. S. A. Embassy, Cairo, A.R.E.
- 21 - M. K. Aly, Astronomy Department, King Abdul Aziz University,  
Geddah, Saudi Arabia
- 22 - M. Soliman, Helwan Observatory, Helwan, Egypt
- 23 - N. Helwa *Solar lab, National research center,*  
*Cairo . A. R. E*

J. Kleczek, Secretary of the IAU - Unesco School :

Mr. President, Ladies and Gentlemen,

The previous international School for astronomers in Egypt was in Alexandria about two thousand years ago. It is therefore appropriate to start another international astronomical School.

We are participating at the Opening Ceremony for the XII th IAU - UNESCO School for Young Astronomers. You will learn lot of new information about the Universe we live in and a tiny part of which we are.. Another aspect of our School is to promote international collaboration among young astronomers from different parts of our planet.

The XIIth IAU - UNESCO School for Young Astronomers is organized in cooperation with the Academy of Scientific Research and Technology. Without the support of the Academy and without your personal help, Mr. President, the School could not take place. Thank you - shokran .

XIIIth IAU - UNESCO SCHOOL FOR YOUNG ASTRONOMERS  
Cairo, August 22 - September 9, 1981

Daily Programme

8,30 - 10.30	Lectures
10,30 - 11.00	Coffee Break
11.00 - 13.00	Lectures
13.30	Lunch
14.30 - 17.00	Visits and Excursions
17.00 - 19.00	Lectures
19.15 - 20.45	Practical Training

Friday free for excursions

Excursions

- 1/ Giza Pyramids
- 2/ Sakara Pyramids
- 3/ Papyrus Museum Cairo
- 4/ Sadat Village: Demonstration of solar water heaters  
Talla Society Developing Center
- 5/ Academy of Maritime Transport ( founded by UNO )
- 6/ Remote Sensing Center
- 7/ Kottamia Observatory / overnight work /
- 8/ Helwan Observatory and Interkosmos Laser Ranging Station
- 9/ National Museum in Cairo
- 10/ Suez channel and Ahmed Hamdy Tunnel Construction

## XIIIth IAU-UNESCO School for Young Astronomers

### LIST OF LECTURES:

	hours	
Space Research	6	M. Moutsoulas
Matter and Energy in the Universe	7	J. Kleczek
Planetary System	4	A. Asaad
Solar Physics	3	J. Kleczek
Celestial Mechanics	2	M. Kamal
Open Problems in Astrophysics	2	M. I. Wanas
Stellar Astronomy (Basic Concepts)	4	A. I. Osman
Interstellar Matter	4	I. A. Issa
Stellar Atmospheres	4	R. A. Ghobrous
Stellar Interior and Evolution	4	A. Z. Aiad
Galactic Astronomy	4	A. S. Asaad
External Galaxies	2	A. I. G. Eldin
Cosmology	2	F. Michael
 <u>Practical Part:</u>		
Observational Instruments	2	A. Z. Aiad
Techniques in Astronomy	2	A. S. Asaad
Practical Training in Astronomy	14	R. V. Helden
Practical Observations at Kottamia	8	M. Ella, S. Nawar, M. Soliman
Utilization of Space Research	2	M. Moutsoulas
 <u>Seminars</u>		
Utilization of Solar Energy in Egypt	2	N. Helwa
Remote sensing	3	staff of the Center
Tracking of Artificial Satellites by Lasers	2	K. Hamal, B. Bagos
Ancient Egyptian Astronomy	2	A. Sadek
Fabry-Perrot Interferometry	2	T. Hips
Solar Compass	1	H. Ragab
Astronomy in Arab Countries	2	M. K. Aly
Practical Training with a 16" Tele- scope	3	D. Siel
Observations with Chromospheric Te- lescope	1	D. Siel
Results of Voyager I and II	2	T. Verbalovich
Seminars by young Astronomers	8	

11.1.82

HELWAN YOUNG ASTRONOMERS' SCHOOL

Holwan, Egypt, 22 Aug.-9 Sept. 1981

Statement of expenditure

<u>Grants to :</u>		Dollars US
J. Kleczek	FF. 5,255 =	\$ 930
A. Gatt		200
Cheng		400
Antonopoulos		100
Theodossiou		100
L. Gesztelyi		200
I.D. Simoes		400
M. Bakhit		200
B. Abdalla		200
R.I. Awachie		300
L. Loiawole		300
R. van Helden (travel grant)	Dfl. 1890.30 =	700.11
M. Moutsoulas (travel grant)	FF. 1 250 =	223.21
R. van Helden (transportation of material) :		
Dfl. 1 253.10 =		497.26
IAU subvention - 1st instalment (July 1981)		3,000
"      "      - 2nd instalment (Sept. 1981)		2,000
		<hr/>
		\$ 9,750.58
Balance		1,250
		<hr/>
		11,000.58
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Financial Report

The School was financed partly from the IAU funds and partly from the Academy of Scientific Research and Technology (ASRT). The IAU granted the school \$ 11,000 while the ASRT has allotted the school 8000 L.E. Altogether a total of 16196 L.E. was available. The IAU has paid directly the stipends to participants as well as Air tickets to lecturers from abroad and transferred to Egypt 5000 \$ on two occasions. The first part was 3000 \$ equivalent to 2100 L.E., (at an exchange rate of 1.00 \$ = 0.7 L.E.) and the second part was 2000 equivalent to 1638 L.E. (at an exchange rate of 1.00 \$ = 0.819 L.E.).

← when?  
paid  
9/1/82

Sources

IAU grant (11.000 \$) at the two rates mentioned	8196.75 L.E.
ASRT grant	8000 L.E.
Total	<u>16196.75 L.E.</u>

Accounts and Expenditure:

1- IAU Account \*

Stipends given to foreign Students	2400 \$
Travel to Professors	1350 \$
Two allotments sent to Egypt	5000 \$
Amount Still hold by IAU for final Settlement of balance	<u>2250 \$</u>
Total	11000 \$

2- Egyptian Account

A- Sources:

- Grant by ASRT	8000 L.E.
- Amount Transferred by IAU on two occasions	3738 L.E.
- Balance Credit (1658 ) due to ASRT out of the 2250 still hold by IAU for final settlement.	<u>1357.426 LE</u>
Total	<u>13095.426LE</u>

\* Letter of IAU on 7/7/1981 ref.: P 1201/y



b- Expenditure:

a- Meals and accomodation for students and lecturers.	5937.534	L.E.
- Tea/coffee and light drinks for coffee break.	383 .540	L.E.
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Total	6321.074	L.E.

b- Transport

- Local transport and excursions to Alex. Suez and Kottamia.	1000.000	L.E.
- Local travelling expences for staff before and during the school.	226.775	L.E.
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Total	1226.775	L.E.

c- Aid to foreign students.	215.000	L.E.
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d- Teaching Material

Materials for lectures and practical work	158.283	L.E.
Books	33.900	L.E.
Stationaries for participants	49.200	L.E.
Booklet on Astronomy	160.000	L.E.
Badges, maps, posters, portifilio	597.350	L.E.
	<hr/>	
Total	998.733	L.E.

e- Honorarium for Lecturers

3 foreign lecturers	500.000	L.E.
12 staff lecturers	920.000	L.E.
3 guest lecturers	80.000	L.E.
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Total	1500.000	L.E.

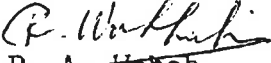
f- Administrative Services

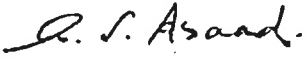
- Telexes, Telegrams, Posts	68.895	L.E.
- Papers and material etc.	180.549	L.E.
- Customs clearance and transport of instruments to Holland.	91.000	L.E.
	<hr/>	
Total	340.444	L.E.

g- Rewards for extra work and help given to school

- Helwan and Kottamia staff	590.000 L.E.
- Academy staff	850.000 L.E.
- Drivers	260.000 L.E.
- Local organizing committee	500.000 L.E.
- Faculty of Science staff assistance during the school	293.400 L.E.
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Total	2493.400 L.E.
Total Expenditure	13095.426 L.E.

The accounts show a sum of 2250 g due to ASRT which has not been received from IAU. On receiving this sum the balance will show an excess of 465.074 L.E. ( 592 g ) over expenditure. This is left for settlement of accounts with IAU.

  
R. A. Wahab  
Accountant

  
A. S. Asaad  
Director of School