Report on the 29th International School for Young Astronomers (ISYA)

Malaysia, 5 - 23 March 2007,
Kuala Lumpur and Langkawi Island

Prof. Dr. Mazlan Othman
Chairman of National Committee on organizing ISYA2007
Mr. Mhd Fairos Asillam
Science Officer in ANGKASA,
Secretary of the National
Committee on organizing ISYA2007
Dr. Michele Gerbaldi
Chairperson for the ISYA programme (IAU)

I – Introduction

Dr. Mazlan Othman, Director General of the Malaysian National Space Agency (ANGKASA), sent a letter of intent, in February 2005 to the IAU Executive Committee offering to host the ISYA in 2007.

The IAU Executive Committee selected Malaysia for the venue of the 29th ISYA between the 5th March and the 23rd March 2007. The IAU agreed to provide transportation to students and professors and Malaysia agreed to cover accommodation and catering expenses for the School, local transportation and facilities for education.

This 29th ISYA was organised by the University Kebangsaan Malaysia (UKM) with the cooperation of the National Space Agency of Malaysia (ANGKASA), the Ministry of Science Technology and Innovation (MOSTI) and the University Malaya (UM).

The School took place:

● at the University Kebangsaan Malaysia (UKM), Selangor - 5 to 9 March 2007

● and then at the MARA Junior Science College, Langkawi Island where is located the National Observatory.- 10 to 23 March 2007.

Objective:

The objective of ISYA 2007 is as follows:

i) To encourage the young scientist especially from the Asia Pacific region to get involved deeply in astronomy research and explore the future development of space science while building a strong network within the countries of this region;

ii) To train and expose the participants to the latest knowledge in the astronomical research arena; and
iii) To present a unique opportunity for participants to have informal discussions among their peers and with recognised experts in the selected fields of research over a period of three weeks.

National Organising Committee:

● Prof. Dr. Mazlan Othman Director General of ANGKASA, Secretary General of Academy Sciences of Malaysia, Chairman of National Committee on organising ISYA2007

● Prof. Dr. Mohd Zambri Zainuddin, Head of Space Science Lab and Deputy Dean of Malaya University

● Prof. Dr. Baharudin Yatim, Director of Space Science Institute, National University of Malaysia

● Mr. Kassim Bahali, Head of Astronomy programme, Al-Khawarizmi Observatory, Malacca

● Mr. Mhd Fairos Asillam, Science Officer in ANGKASA, Secretary of the National Committee on organising ISYA2007

***Faculty Members*:**

♦ Dr. Chenzhou Cui, China, National Astronomical Observatory
Virtual Observatory

♦ Prof. Dr. Jean-Pierre De Greve, Belgium, Brussels University
Binary star evolution with massive components

♦ Assoc. Prof Mamoru Doi, Japan, University of Tokyo
Galaxies

♦ Prof. Dr. Edward Guinan, USA, Villanova University
Binary stars

♦ Prof. Dr. K.R. Lang, USA, Tufts University
The Sun

♦ Dr. Hakim L. Malasan, Indonesia, Institut Teknologi Bandung
Stellar observations

♦ Assoc. Prof. Mark Rast, USA, University of Colorado
Astrophysics of the Sun

♦ Prof. N. Udaya Shankar, India, Raman Research Institute
Radioastronomy

♦ Prof. Dr. Mohd Zambri Zainuddin, Malaysia, University Malaya
Astronomy

♦ Prof. Dr. Michèle Gerbaldi, France, Institut d'Astrophysique de Paris
Stellar atmosphere

All the relevant information on the ISYA 2007 including the course structure was given to each participant in a printed form (leaflet attached).

II - Participants

This ISYA was advertised in the Bulletin of the IAU, as well as on the Web Page of ANGKASA.
Moreover, specific information was sent to several institutions being in the geographical area considered for this ISYA.

From close to 60 application received from abroad, 28 were selected from foreign countries.
The total number of participants was 38: 10 Malaysians and 28 foreigners from 11 countries: China (2), DPR Korea (3), India (3), Indonesia (7), Nepal (1), New Zealand (1), Philippines (4), Shri Lanka (1), Taiwan (1), Thailand (3) and Vietnam (2). There were only 9 female participants.
We underline the participation of 3 DPR Korean students, thanks to the efficient collaboration of the Scientific Counsellor at the DPR Korea Embassy in Kuala Lumpur.

The background of the participants, ranged from a MSc. degree to having finished their PhD one year ago.

22 % of the foreign participants and 40 % from the Malaysian ones were older than 35 years. This results of local situations. In Malaysia there is no MSc in astrophysics and among the selection of the participants an equilibrium was searched between young researchers and confirmed ones. Participants from Philippine were all staff members of the Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) where a TAD programme is currently running.

To fit one of the objectives of this ISYA, a larger weight for the selection of the participants was given to the applicants specialised in Solar physics: for example among the 7 participants selected from Indonesia, 4 are involved in Solar physics observational research.

It should also be noted that most of the participants were either lecturer or assistant researcher in a university

The list of the participants is given in the Annexe I.

III – Academic activities

English was the language of the ISYA.

During the ISYA 2007 the emphasise was put on:

- Astronomical instrumentation;
- Radio astronomy,
- Solar physics;
- Virtual observatory.

Among the ISYA activities are also the observing sessions using the 0.5 meter Carbon Truss, Ritchey-Chrétien Cassegrain Reflector robotic telescope and solar telescope systems at the Langkawi National Observatory.

The detailed time-table of all the activities is given in the Annexe II.

III – 1 – Lectures

The topics covered by the lectures are summarised below.
The powerpoint files of all the lectures are stored in the DVD attached to this Report.

♦ Dr. Chenzhou Cui, China, National Astronomical Observatory
Virtual Observatory; Astronomical data base, archives
3 lectures (4.5 hours)
Computer lab. on: Introduction of VO and spectroscopic data reduction with IRAF using data obtained during the observing sessions at Lagkawi observatory
(4 sessions, 8 hours)

♦ Prof. Dr. Jean-Pierre De Greve, Belgium, Brussels University
Evolution of close binary stars with massive components
4 lectures (6 hours)

♦ Assoc. Prof Mamoru Doi, Japan, University of Tokyo
Galaxies and Clusters of galaxies, Big Bang Cosmology, Formation and Evolution of Galaxies, Observation technique of galaxies, data analysis and modeling
3 lectures (4.5 hours)

♦ Prof. Dr. Edward Guinan, USA, Villanova University
Variable and eclipses stars as astrophysical laboratories;
The Effects of Coronal X-ray and Chromospheric UV Emissions on of dG-dM on hosted planets.
4 lectures (6 hours)
Solar observing session at the Langkawi Observatory.
(1 session, 3 hours)

♦ Prof. Dr. K.R. Lang, USA, Tufts University

The Sun
4 lectures (6 hours)

♦ Dr. Hakim L.Malasan, Indonesia, Institut Teknologi Bandung
Physical Model of Instrumentation, Basic Instrument Performance Tests, Spectroscopic Observation & Reduction and Optical Observing Techniques or Image Processing in Astronomy.
4 lectures (6 hours)
Computer lab. with IRAF to reduce data.
(2 sessions, 4hours)

♦ Assoc. Prof. Mark Rast, USA, University of Colorado
Solar convective dynamics and magnetohydrodynamics. Helioseismology
4 lectures (6 hours)
Solar observing session at the Langkawi Observatory.
(1 session, 3 hours)

♦ Prof. N. Udaya Shankar ,India, Raman Research Institute
Radioastronomy, Radio Sources, Radio astronomy cosmology
6 lectures (9 hours)

♦ Prof. Dr. Mohd Zambri Zainuddin, Malaysia, Universiti Malaya
Stellar astronomy: directly observable quantities from astrometry, photometry, spectroscopy and interferometry.
3 lectures (4.5 hours)

♦ Prof. Dr. Michèle Gerbaldi, France, Institut d'Astrophysique de Paris
Stellar modeling: key issue for physics and astrophysics.
Determination of the fundamental stellar parameters. Stellar atmosphere model
3 lectures (4.5 hours)

III - 2 - Practical Activities

Several practical activities took place during that ISYA:

♦ Prof. J-P De Greve Belgium and Prof. Dr. Edward Guinan
gave information and advices on:
- How to present results and to give a talk
- How to apply to PhD programme, etc.
- How to apply for jobs and writing curricula vitae / resumes etc.
- How to write science proposals etc.

3 sessions (4.5hours)

♦ Dr. Chenzhou Cui
developed Computer lab. Sessions on: Virtual Observatory and mining data base as well as the reduction of data, with IRAF, using data obtained during the observing sessions at Langkawi observatory

Reduction with IRAF was instructed together with Hakim L. Malasan at the laboratory.
(4 sessions, 8 hours)

A network of 22 computers under LINUX/Windows was set up for these practical activities. Specialised software packages were installed.

♦ Dr. Hakim L. Malasan
directed the observational sessions at the Langkawi observatory on CCD imaging and spectroscopy. He also helped Dr. Cui to instruct participants in the images and spectra reduction using IRAF.
6 observing sessions took place (8.30pm – 11.30pm)

♦ Assoc. Prof. Mark Rast and Prof. Dr. Edward Guinan
set up a solar observational session at the Langkawi observatory (3 hours)

III – 3 – Night Observations at Langkawi National Observatory

Six observing sessions (8.30pm – 11.30pm) took place at the Langkawi National Observatory for CCD imaging and spectroscopy with the 0.5 m telescope. *BVRI* imaging sessions on March 12, 20 and 21 and Spectroscopy sessions on: March 14, 16 and 19.

Instructor/Tutor:

1.	Hakim L.Malasan	-	Bosscha Observatory, ITB Indonesia
2.	M. Ridwan Hidayat	-	Astronautic Technology (M) Sdn Bhd

Night Assistant:

1. Lau Chen Chen	-	National Planetarium, ANGKASA
2. Karzaman Ahmad	-	Langkawi National Observatory, ANGKASA
3. Farahana Kamarudin	-	Langkawi National Observatory, ANGKASA

Each participant had the possibility to observe twice: one session for imaging and for spectroscopy.

The list of these sessions and the participants are given in the Annexe III.

A general discussion on the rôle of this observatory took place on March 22 from which a list of actions emerged ranging from the calibrations of the instrumentation which has to be done till the human resources needed to manage the observatory.

Dr. Hakim Malasan was a key-person for this programme during the ISYA. AS a follow up, Dr. Malasan agreed to spent several months this year 2007, in Malaysia, at Langkawi National Observatory to set up the final stages of operation for the telescope and the associated equipment.

III – 4 - Participant Talks

Six sessions were organised for talks by the participants on their current interest and research domains.
27 talks were given; the list of these talks is in Annexe IV and the powerpoint files of these presentations are on the DVD.
Each talk was of 15 minutes plus 5 minutes for discussion. As a rule, the timing for each talk has been very strict.

The participants also presented the results of the observations done at Langkawi observatory during two more sessions.

IV - Publication of a DVD

A DVD has been produced. It contains the files of all the lectures as well as the participants talks (powerpoint presentations), the observing sessions and various reportage of social activities during the ISYA.
Each participant received such one DVD.
Concerning the lectures, photocopies were given to the participants before each course.

V – Non - Academic Activities

Non academic activities were organised during the ISYA.
During the week-end various visits on Langkawi island took place on Sunday March 11th , Saturday March 17th and Sunday March 18th.
Formal dinners took place during the ISYA: they are described in the attached leaflet.
These social activities among lecturers, participants and organising committee members played an important rôle in the conviviality of an ISYA.

VI – Other Scientific Activities

Besides the academic programme of the ISYA, the lecturers gave several conferences :
● At the Opening Ceremony, at UKM University, Kuala Lumpur, Michèle Gerbaldi gave a conference attended by 150 persons from the university including about 80 students.
● At the National Science Museum, Kuala Lumpur, Ed Guinan conference was attended by 250 schoolboys and girls (15 - 17 years old)
● At the National Planetarium, Kuala Lumpur, Udaya Shankar conference was attended by 100 schoolboys and girls (15 - 17 years old) and 50 university students
● At the MARA Science College , Langkawi, Ed Guinan conference was attended by 250 schoolboys and girls (15 - 17 years old) followed by more than 2 hours of questions/answers with ISYA lecturers.
● At the Terengganu University, Michèle Gerbaldi conference was attended by about 150 university lecturers and students.

An exhibition on astronomy and space sciences was set up by ANGKASA at the MARA Science College at Langkawi for 3 days, including a portable planetarium,

for the benefit of the students there.

VII - Budget and Local Organisation

It must be strongly emphasised that this ISYA was organised by ANGKASA at a level of involvement and financial support never met before in any ISYA.
The budget input of ANGASA (Malaysian National Space Agency) into the ISYA allowed the invitation of 28 foreign participants.

During the all ISYA a team of 11 persons from the National Malaysian Space Agency was dealing with all the administrative activities, photocopies, organising transportation, etc. This is a level of support never reached before.
The list of the members of this team is given in the attached document.

VIII – Conclusion

This ISYA is the starting point for the development of new programmes in Malaysia in particular related to the use of the Langkawi National Observatory in both stellar and solar domain. A full session was devoted to underline criteria for the management of this observatory and its use for research through international cooperation and for the training of future observers at larger telescope.

It is clear that this observatory with its present equipment can play an important rôle in the training to understand how an observation has to be done. Such a knowledge is important to write a proposal for observing time at any major observatory.

The solar telescope at Langkawi National Observatory could also potentially be integrated into the worldwide network of Hα patrol instruments or that of precision photometric imagers.

To conclude; the 29th ISYA was successfully held and organized.

ANNEXE I

List of the Participants

Name	Country	Institution	Gender
Dai Zhibin zhibin-dai@hotmail.com	China	Yunnan Observatory	Male
Yuan Jinzaho yjz@ynao.ac.cn	China	Yunnan Observatory	Male
Nam Sok-Chon pptayang@co.chesin.com, pyevol@co.chesin.com	DPR Korea	Pyongyang Astronomical Observatory	Male
Kim Mun-Song pptayang@co.chesin.com, pyevol@co.chesin.com	DPR Korea	Pyongyang Astronomical Observatory	Male
Kim Yong-Nam pptayang@co.chesin.com, pyevol@co.chesin.com	DPR Korea	Pyongyang Astronomical Observatory	Male
Laxmikant Chaware chaware@iucaa.ernet.in	India	Pt. Ravishankar Shukla University	Male
Yogesh Maan ymaan4@gmail.com	India	Astronomy & Astrophysics, Raman Research Institute	Male
Wasim Raja wasim@rri.res.in	India	Raman Research Institute	Male
Hanindyo Kuncarayakti kuncarayakti@students.as.itb.ac.id, kuncarayakti@gmail.com	Indonesia	Bandung Institute of Technology	Male
Mochamad Ikbal Arifyanto ikbal@as.itb.ac.id	Indonesia	Bandung Institute of Technology	Male
Dading Nugroho dading@students.as.itb.ac.id	Indonesia	Bandung Institute of Technology	Male
Nanang Widodo nang@yahoo.co.id	Indonesia	Indonesian Institute of Aeronautics and Space (LAPAN)	Male

Name	Country	Institution	Gender
Agustinus Gunawan Admiranto gun_agustinus@yahoo.com	Indonesia	Indonesian Institute of Aeronautics and Space (LAPAN)	Male
Clara Yono Yatini clara@bdg.lapan.go.id	Indonesia	Indonesian Institute of Aeronautics and Space (LAPAN)	Female
Emanuel Sungging Mumpuni nggieng@postmaster.co.uk	Indonesia	Indonesian Institute of Aeronautics and Space (LAPAN)	Male
Farah Hani Abdul Rahim farahhani@gmail.com	Malaysia	Universiti Kebangsaan Malaysia (UKM)	Female
Nazhatulshima Ahmad a_naza8898@yahoo.com	Malaysia	University of Malaya (UM)	Female
Geri Gopir gkagopir@gmail.com	Malaysia	Universiti Kebangsaan Malaysia (UKM)	Male
Zulhibabullah Ismail zul@angkasa.gov.my	Malaysia	National Space Agency (ANGKASA)	Male
Mohd Khairul Hisham Ismail khairul@angkasa.gov.my	Malaysia	National Space Agency (ANGKASA)	Male
Kassim Bahali kassimbahali@gmail.com	Malaysia	Al-Khawarizmi Observatory	Male
Siti Jamiah Mohamad – yob sitij109@salam.uitm.edu.my	Malaysia	Universiti Teknologi MARA (UiTM)	Female
Sua Sin Zang szsua@yahoo.com szua313@gmail.com	Malaysia	South West University, P.R. China	Male
Roslan Umar roslan@udm.edu.my	Malaysia	Unit Falak, Sekolah Pengajian Umum (UDM)	Male
Joko Satria A. kencana26@yahoo.com	Malaysia	University of Malaya	Male

Name	Country	Institution	Gender
Jayanta Acharya jayantaacharya@gmail.com	Nepal	Balmeki Campus Mahendra Sankrit University	Male
Robyn Michele Woollands RMW64@student.canterbury.ac.nz	New Zealand	University of Canterbury, Christchurch	Female
Siramas Komojinda sko18@student.canterbury.ac.nz	New Zealand	University of Canterbury, Christchurch	Female
Ma Rosario Ramos marosarioramos@yahoo.com	Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)	Female
Benny Nieva nieva@yahoo.com	Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)	Female
Salvador Quirimit sg_quirimit@yahoo.com	Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)	Male
Michael Bala ekimalab@gmail.com	Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)	Male
Nuwan Indika Medagangoda Indika@accmt.ac.lk	Sri Lanka	Arthur C. Clarke Institute	Male
Chang Chan-Kao rex@astro.ncu.edu.tw	Taiwan	Institute of Astronomy, National Central University	Male

Name	Country	Institution	Gender
Wiraporn Maithong wiraporn@cmru.ac.th	Thailand	Chiang Mai Rajabhat University	Female
Amnart Sukom amnart_2525@hotmail.com	Thailand	Chiang Mai University	Male
Nguyen Tien Dung tiendung_univinh@yahoo.com	Vietnam	Department of Physics, Vinh University	Male
Nguyen Duc Phuong nguyend.phuong@gmail.com	Vietnam	Hanoi Observatory, University of Education, Hanoi	Male

ANNEXE II

Time Table

Time	5 March MONDAY	6 March TUESDAY	7 March WEDNESDAY
8.30 – 9.00 am	Registration		
9.00 am– 10.30 am	ISYA Opening Dr. Mazlan Othman Dr. M. Gerbaldi Briefing on ISYA 2007	Stellar Modeling Gerbaldi 2	Radio Astronomy Udaya 3
10.30 am– 11.00am Break			
11.00am – 12.30pm	Stellar Astronomy Zambri 1	Radio Astronomy Udaya 2	Variable Star/Heliophysical Guinan2
12.30 - 2.00 pm Lunch			
2.00 pm– 3.30 pm	Radio Astronomy Udaya 1	Variable Star/Heliophysical Guinan 1	Stellar Astronomy Zambri 2
3.30pm – 4.00pm Break			
4.00pm-5.30pm	Stellar Modeling Gerbaldi 1	To present results and to give a talk (Guinan)	Participant-Talks1
Evening 9.00pm-11.0pm		8.00 – 10.30 PM ISYA Opening Ceremony (Chancellery Building) Public lecture Dr. M. Gerbaldi	
			Public Lecture (National Science Center - 2:00pm-4:00 pm) Dr. EdGuinan

Time	**8 March THURSDAY**	**FRIDAY Time-Table**	**9 March FRIDAY**
9.00 am– 10.30 am	Radio Astronomy Udaya 4	9.00 am– 10.30 am	Stellar Astronomy Zambri 3
10.30 am– 11.00am Break		10.30 am– 11.00am Break	
11.00am – 12.30pm	Stellar Modeling Gerbaldi 3	11.00am – 12.30pm	Galaxies Doi1
12.30 - 2.00 pm Lunch		12.30 - 2.45 pm Lunch (and prayer for Muslims)	
2.00 pm– 3.30 pm	Variable Star/Heliophysical Guinan 3	2.45 pm– 4.15 pm	Instrumentation Malasan1
3.30pm – 4.00pm Break		4.15 pm – 4.45pm Break	
4.00pm-5.30pm	Participant-Talks2	4.450pm– 6.15pm	Instrumentation Malasan2
Evening 9.00pm-11.0pm	National Planetarium visit Public lecture Dr. U. Shankar		9:00pm departure to Langkawi island by bus (night journey)

Time	**12 March Monday**	**13 March Tuesday**	**14 March Wednesday**
9.00 am– 10.30 am	Galaxies Doi 2	Galaxies Doi3	Radio Astronomy Udaya 6
10.30 am– 11.00am Break			
11.00am – 12.30pm	Radio Astronomy Udaya5	Solar Physics Rast1	Solar Physics Rast3
12.30 - 2.00 pm Lunch			
2.00 pm– 3.30 pm	Data Archiving Cui1	Solar Physics Rast2	Solar Physics Rast4
3.30pm – 4.00pm Break			
4.00pm-5.30pm	Data Archiving Cui2	Lab VO (2h)	Data Archiving Cui3
Evening 9.00pm-11.0pm	Observations 1 Imaging - Malasan		Observations 2 Spectroscopy- Malasan

Time	**15 March THURSDAY**	**FRIDAY Time-Table**	**16 March FRIDAY**
9.00 am– 10.30 am	Solar observations (Rast – Guinan)	9.00 am– 10.30 am	Variable Star/Heliophysical Guinan 4
10.30 am– 11.00am Break		10.30 am– 11.00am Break	
11.00am – 12.30pm	Solar observations (Rast – Guinan)	11.00am – 12.30pm	Advices on writing, Cvs, application for jobs Guinan
12.30 - 2.00 pm Lunch		12.30 - 2.45 pm Lunch (and prayer for Muslims)	
2.00 pm– 3.30 pm	Lab IRAF1 (2h) Cui	2.45 pm– 4.15 pm	Lab IRAF2 (2h) Cui
3.30pm – 4.00pm Break		4.15 pm – 4.45pm Break	
4.00pm-5.30pm	Instrumentation Malasan 3	4.450pm– 6.15pm	Lab IRAF2 (2h) Cui
Evening 9.00pm-11.0pm		Evening 9.00pm-11.0pm	Observations 3 Spectroscopy - Malasan

Time	**19 March Monday**	**20 March Tuesday**	**21 March Wednesday**
9.00 am– 10.30 am	Sun Lang1	Evolution binary stars DeGreve2	Sun Lang3
10.30 am– 11.00am Break			
11.00am – 12.30pm	Instrumentation Malasan 4	Sun Lang 2	Evolution binary stars DeGreve3
12.30 - 2.00 pm Lunch			
2.00 pm– 3.30 pm	Evolution binary stars DeGreve1	Advisors on writing papers DeGreve	Participant-Talks5
3.30pm – 4.00pm Break			
4.00pm-5.30pm	Participant-Talks3 and Observation results	Participant-Talks4	Participant-Talks6
Evening 9.00pm-11.0pm	Observations 4 Spectroscopy - Malasan	Observations 5 Imaging	Observations 6 Imaging

Time	**22 March Thursday**	**Friday time-table**	**23 March Friday**
9.00 am– 10.30 am	Evolution binary stars DeGreve4	9.00 – 10.30 am	General discussion on ISYA
10.30 am– 11.00am Break		10.30 – 11.00am Break	
11.00am – 12.30pm	Sun Lang4	11.00am – 12.30pm	**CLOSING CEREMONY**
12.30 - 2.00 pm Lunch			
2.00 pm– 3.30 pm	Observatory Management (general discussion)		

ANNEXE III

Observation Sessions

Deep Sky CCD Imaging/Astrophotography

Date : 12 Mac 2007
Time : 8:30 pm – 12:30am
Venue : Langkawi National Observatory
Instructor : Hakim L. Malasan
M. Ridwan Hidayat
Assistant : Lau Chen Chen
Farahana Kamarudin
Karzaman Ahmad

No.	Name of Participants	Group
1	Kassim Bahali	A
2	Ador Quirimit	A
3	Chat Rosario Ramos	A
4	Agustinus Gunawan Admiranto	A
5	Nguyen Duc Phuong	A
6	Clara Yono Yatini	B
7	Joko Satria A.	B
8	Mike Bala	B
9	Benny Nieva	B
10	Roslan Umar	B

Note:

A: M42
B: Christmas Tree

Spectroscopy

Date : 14 Mac 2007
Time : 8:30 pm – 12:30am
Venue : Langkawi National Observatory
Instructor : Hakim L. Malasan
M. Ridwan Hidayat
Assistant : Lau Chen Chen
Karzaman Ahmad

No.	Name of Participants	Group
1	Dai Zhi Bin	A
2	Rex Chang Chan Kao	A
3	Siti Jamiah Mohamad Job	A
4	Kim Yong Nam	A
5	Wasim Raja	A
6	Yogesh Maan	A
7	Nazhatulshima Ahmad	B
8	Kim Mun Song	B
9	Nam Sok Chon	B
10	Yuan Jin Zhao	B
11	Emanuel Sungging	B
12	Nguyen Tien Dung	B

A; Betelguese, Rigel
B: Sirius, Castor

Spectroscopy

Date : 16 Mac 2007
Time : 8:30 pm – 12:30am
Venue : Langkawi National Observatory
Instructor : Hakim L. Malasan
M. Ridwan Hidayat
Assistant : Lau Chen Chen
Karzaman Ahmad

No.	Name of Participants	Group
1	Amnart Sukom	A
2	Wiraporn Maithong	A
3	Geri Gopir	A
4	Siramas Komonjinda	A
5	Zulhibabulah Ismail	A
6	Hanindyo Kuncarayakti	B
7	Mochamad Ikbal Arifyanto	B
8	Dading Nugroho	B
9	Nanang Widodo	B
10	Nuwan Indika Medagangoda	B

A: Sirius, Procyon
B: Regulus, Alphard

Spectroscopy

Date : 19 Mac 2007
Time : 8:30 pm – 12:30am
Venue : Langkawi National Observatory
Instructor : Hakim L. Malasan
M. Ridwan Hidayat
Assistant : Lau Chen Chen
Karzaman Ahmad

No.	Name of Participants
1	Sua Sin Zang
2	Farah Hani Abdul Rahim
3	Jayanta Acharya
4	Joko Satria A.
5	Mike Bala
6	Ador Quirimit
7	Kassim Bahali
8	Clara Yono Yatini
9	Chat Rosario Ramos
10	Benny Nieva
11	Nguyen Duc Phuong
12	Laxmikant Chaware

Note:
The sky is cloudy, so the spectroscopy observation cannot be done.

Deep Sky CCD Imaging/Astrophotography

Date : 20 Mac 2007
Time : 8:30 pm – 11:30pm
Venue : Langkawi National Observatory
Instructor : M. Ridwan Hidayat
Assistant : Lau Chen Chen
Karzaman Ahmad

No.	Name of Participants	Group
1	Siti Jamiah Mohamad Job	A
2	Kassim Bahali	A

Object: M42

Deep Sky CCD Imaging/Astrophotography

Date : 21 Mac 2007
Time : 8:30 pm – 11:30pm
Venue : Langkawi National Observatory
Instructor : M. Ridwan Hidayat
Assistant : Lau Chen Chen
Farahana Kamarudin
Karzaman Ahmad

No.	Name of Participants	Group
1	Sua Sin Zang	A
2	Farah Hani Abdul Rahim	A
3	Robyn Michele Woollands	A
4	Emanuel Sungging	A
5	Nguyen Tien Dung	A
6	Jayanta Acharya	A

Note:
The sky is cloudy, so the deep sky CCD imaging observation cannot be done

ANNEXE IV

Participants Talks

Talks – Session 1 March 7

- Laxmikant Chaware : Redshift of galaxies, preliminary results ATT observatiosn.
- Chang Chan-Kao : Information from the 2MASS Star Count
- Siti Jamiah Mohamad – yob : Evolution of AGB stars

Talks – Session 2 March 8

- Emanuel Sungging Mumpuni : Solar study
- Clara Yono Yatini : Geomagnetic storms, identification of solar source
- Robyn Michele Woollands : Spectroscopic analysis of the binary star RS Cha
- Siramas Komojinda : Analysis of the binary system: RZ Tau
- Agustinus Gunawan Admiranto : Solar flares

Talks – Session 3 March 19

- Mochamad Ikbal Arifyanto : from subdwarfs to M giants.
- Dai Zhibin : observation of cataclysmic variable and pre-cataclysmic binary
- Hanindyo Kuncarayakti : Open clusters studies
- Dading Nugroho: X-ray flare of SgrA; clusters of galaxies
- Yuan Jinzhao: Chromospheric activity in stars

Talks – Session 4 March 20

- Yogesh Maan: Single oulse search for radio transcients
- Roslan Umar : Kusza observatory, Darul Iman university, Terengganu
- Nazhatulshima Ahmad : Nature and evolution of disk around Be stars
- Sua Sin Zang : Astronomy educatio; astronomy-archeology
- Kassim Bahali: Astronomy education at Al_Khawarizmi astronomy center

Talks – Sessions 5 and 6 March 21

- Geri Gopi: Down to Earth astronomy, muon detection
- Nam Sok-Chon: Coronal mass ejection
- Nanang Widodo: Solar observations
- Wasim Raja: Holography with radio telescope
- Nuwan Indika Medagangoda: Hα profile in Be stars; university education.
- Jayanta Acharya: Astronomy in Nepal
- Joko Satria: Adaptive optics for astronomical imaging
- Farah Hani Abdul Rahim: Polar-equatorial Ionospheric Precipitable water vapour
- Zulhibabullah Ismail and Mohd Kha