

Report of the 35th ISYA 2013, Bandung, Indonesia,

25 August – 14 September 2013

Jean-Pierre De Greve, Chairman PG ISYA

12 September 2013

Introduction

The 35th International School for Young Astronomers (ISYA 2013) took place on 25 August until 14 September 2013 in Bandung West Java – Indonesia, commemorating 50th anniversary of Indonesia National Institute of Aeronautics and Space (LAPAN). ISYA 2013 was organized by a joint committee of Space Science Center of LAPAN and the International Astronomical Union (IAU), together with Astronomy Division, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung (ITB), and thanks to the support of the Norwegian Academy of Sciences and Letters (NASL).

The organizers of the 35th ISYA were:

Ms. Clara Yarini, Director Space Science Center of LAPAN

Prof. Hakim L. Malasan, ITB

Prof. Jean-Pierre De Greve, ISYA

The IAU covered travel expenses of the participants and of the lecturers (visa, insurance, and air fare, local transport, and cultural trips), and offered a School Reception to participants and collaborators. The airfares of the participants were minimized as all were bought directly from Indonesia through a local travel agency. All the other expenses including boarding and lodging were covered by Lapan.

1. Location and theme

The School was conducted in the Assessment building of the Jerege Lembaga Administrasi Negara Jatiningor just outside Jatiningor, some 40 km from Bandung. Rooms with hotel service (including regular laundry service) were provided for lecturers and students. A large conference room was used as classroom,, fully equipped. The organisers had arranged that attending lecturers and staff could access the internet in the back of the room, whereas this was not possible for the students during the lectures. A separate computer at the back of the room was provided to allow a central collection of all the photos.

The scientific topics covered by ISYA are: space weather, space science, cosmology, galactic astronomy, origin and evolution of galaxies, space observation and instrumentations (radio and optic), involving both lectures and observational work in teams. The goal was to give students ideas of modern research projects and to show them which technical expertise is needed to plan, propose for, obtain, reduce and analyse modern astronomical data.

2. Students

Out of 106 candidates, 40 were selected for participation (20 Indonesian students and 20 coming from regional countries). Three of them withdraw, and three additional candidates were selected. One of the selected students declined at the last moment. The final number of participants is 39. In total there were students from Indonesia, Cambodia, Philippines, Taiwan (R.O.C.), China, Nepal, Malaysia, Vietnam, Thailand, India, Sri Lanka.

The gender distribution was 41% female, 59% male. The list of students is attached (*Annex 1*).

3. Arrivals and departures

Students and lecturers were met at the airport, and transport was arranged to bring them to Jatinangor.

4. Opening ceremony of the ISYA.

The Opening Ceremony was held at LAPAN Bandung on Monday, 26th August at 9 am. The participants were welcomed by the Chairman of Lapan, Mr. Bambang S. Tejasukmana, Ms. Clara Yarini, Director of the SpaceScience Center of Lapan, and Prof. Jean-Pierre De Greve on behalf of the ISYA. The opening ceremony was followed by the first public lecture (see 5.6). Afterwards, a lunch was offered by LAPAN. After the lunch the students were transported back to Jatinangor.

5. Program

The overall program is given in Annex 2.

5.1. Lectures:

The topics covered were:

- Stellar structure and atmospheres
- Emission-line stars
- Dark matter, dark energy
- Origin and evolution of galaxies
- Cosmology : observational aspects
- Radio-astronomy
- Space weather
- Solar physics, solar magnetosphere
- Modern telescopes, instrumentation and observing techniques

The list of lecturers is given in Annex 3. In total, there were 15 lecturers (including those of the public lectures) scheduled coming from 7 countries. All lectures were made available to the students in pdf.

5.2. The schedule of the program with the topics is attached (*Annex 3*). Lectures started at 8:00 am and finished at 12:30 (with sometimes an afternoon session), the practical sessions in the afternoon ended at 5:00 pm. There were two teaching slots in the morning, and two in the afternoon, each separated by a coffee/tea break of 30 minutes. The lunch break lasted usually from 12:30 till 13:30.

5.3. Student presentations:

Several slots were reserved for student presentations. There were two different types of presentations: individual student presentations (Annex 4) for which students could sign up in specific time slots, and group presentations of the observational project and the obtained result. The lecturers agreed that the presentations were well prepared and of high quality.

5.4. Observational training and data reduction :

Students received lectures on both theoretical and practical aspects of telescopic observations. A manual was provided with the necessary instrumental information to prepare the observational projects. Students were divided in 8 groups, each with a monitor. The observational projects were chosen by the students themselves, with monitoring by the observational support team (Annex 4). There were 5 20 cm-telescopes available with ccd, for photometric work, and one telescope for spectroscopic work. Observations were carried out in a flat field on the compound, near the assessment building.

Four nights were scheduled for observations from 7:30 pm till midnight. Unfortunately, three of the nights were cloudy, allowing only some spectral work.

Data reductions were done using IRAF package under the guidance of the tutors.

5.5. Two brief special seminars were given on 2 topics related to scientific careers:

- How to write and publish a research paper, and Applying for a position and writing projects (J.P. De Greve, Brussels, Belgium)
- Basic rules for choosing a subject for a PhD thesis (Michel Dennefeld, Paris, France).

5.6. Public lectures:

August 26, 10:30-12:30, Thomas Djamaluddin, Space weather and its impact on our life

September 3, 10:30-12:30, Nat Gopalswamy, The many faces of the sun

September 10, 10:30-12:30, Bambang Hidayat, Cultural aspects of astronomy

5.7. Alumni session:

The Indonesian ISYA alumni organized a special session (see report in Annex 5). Several alumni witnessed on their participation and the influence that it had on their career. The participants also discussed the usefulness of having regional alumni associations, their possible activities and what the IAU (or the OAD) could do for them. The following suggestions emerged:

- a. Contributions to the C46 and OAD newsletters
- b. ISYA alumni and lecturers lunches at regional IAU meetings
- c. Information from IAU/OAD on Master and PhD opportunities.

6. Social program

Schedule:

Sunday September 1: Outbond activities in the neighboring park

Monday September 2: Visit to Kamojang thermal energy enterprise and visit to the crater

Saturday September 7: Field trip to Bosscha Observatory and nearby crater

Sunday September 8: Saung Udjo dance and song performance and visit of shopping mall

7. Closing

At the end of the ISYA, students filled in a 3 page evaluation sheet. The results of that inquiry are found in *Annex 6*. In the following closing ceremony, the students received their certificate witnessing their participation in the ISYA2012.

The evaluation of the ISYA 2013 is overwhelmingly positive. An overview arranged per item is given below, as well as a synthesis of the critical comments for future improvement.

8. Evaluation by the students

The statistics of the query are given in Annex 6.

General: The website information and the application handling were considered as good.

Lectures: Strong satisfaction among students, though a fraction finds 2 hr lecturers a bit long. Students were pleased with the easy question and answer part.

We asked the students for their most favourite lecture. Here's the result for the 5 most mentioned lecturers:

- The lectures of Michele Gerbaldi and Jean-Pierre De Greve (including the one on publishing a scientific paper)

(both lecturers more than 10 times mentioned in the inquiry)

- Radio astronomy by Udaya Shankar (though the use of the white board was not so appreciated because of bad visibility)
- The lectures of Philippe Durouchoux, especially the one on dark energy
- Ex equo: Michel Dennefeld (Instrumentation) and Mamoru Doi (Observational cosmology)

Observation training: Available time and instruction on data reduction were mentioned as problems (see comments), as well as a need for better preparation for observations through lectures. Very good contact with the supervisors.

Presentation exercise: Student presentations were found to be well organized and highly useful (see also comments), with enough time. The same appreciation was given for the project presentations.

Accommodation: Great satisfaction, with a little more spread in appreciation for breakfast and other meals (see also comments)

Cultural tours and leisure: Cultural tours and leisure were also evaluated as very good. The public talks received somewhat less appraisal.

The future: Students had an overall positive impression from this ISYA, from which they benefitted significantly. They specifically found that it helped them developing an international network, and gave them a broader view on the research done in astronomy, thus encouraging them to strengthen their research aspirations in astronomy.

Synthesis of individual comments:

1. On the lectures

- I hope, if possible, ISYA can teach us on how to do modelling in stellar astrophysics.

2. On the observation training

- I hope that the data reduction part can get more attention. Because I want to make a scientific paper, so I need to learn the correct way to reduce the data.
- Because of the weather, I think the time for observation is a little inadequate to complete the project. Also, the lectures for data processing are a little inadequate for all the participants to go through the whole data reduction process.
- I need more time for observation because the weather considerably reduced my observing time.
- I didn't want to learn just on observing, but I want to get the theory too.
- Not all tutors know what we should do to process the data.

3. On individual student and project presentations

- In my opinion, the individual and project presentations exercise really helped me improve my presentation skills and confident level, especially when presenting in English.
- The individual student presentations were a useful part to exercise our presentations in front of international people.
- I think these parts are important, because we can know each other so we can build similar connections after the ISYA.
- It makes me more confident to speak in front of many people.

4. On the accommodation

- The accommodation was very good, such as a comfortable room, special meals, and good support from the committee and very good place for study. I love ISYA.
- Too cold and the water is not good. The food was almost the same every day. I got bored with the food. I hoped we could also eat food from another country.
- Accommodation was just okay! The food was sometimes not my preference. Probably because I'm not used to spicy food. Sometimes it was too sweet, too salty, too spicy, but it's okay! At least I got to eat Indonesian food.
- The food should be varied and acceptable for all participants.

5. On the cultural tours, leisure and public lectures

- The public talks were not as interesting as the lectures.
- I hope, if possible, that we can observe and collect data using the Bosscha Observatory. I also think that IRAF software should be taught adequately before we do the night observations.
- Public lecture should be close to the classroom, or students should be given more time between class lectures and public talks.

7. On the future

- ISYA 2013 is my imaginative world, like Hogwarts. Mr Chop Chop acts like Dumbledore and I'm really happy for this. Participants, lecturers, committee and everything is fine. But the thing that ruins a lot was the internet connection.
- With no ongoing research and very few researchers (most of them are abroad as well) in my country, this was a dream come true for me. This totally changed my life. ISYA 2013 changed my life.
- ISYA helped me to determine what I'm supposed to do next in astronomy.

- ISYA encourages, inspires and reminds me what kind of motivation let me want to be an astronomer. Also, it broadens my vision to this world. Different cultures, different people, different attitudes of working!
- I enjoyed and learned a lot! I know that when I get home, I can share something with other people and encourage them to participate in the next ISYA.
- A very beneficial activity that allows us to learn and understand new perspectives, as well as experience collaborating with different cultures.
- Please give the method for teaching too, because maybe some participants are teachers or lecturers.

Concluding comments

- In general, I think ISYA made me grow in mind and spirit. It has encouraged me to get into this field, and hopefully, I will get that chance to show I can be a future astronomer or astrophysicist! Maybe one suggestion before I end my comments. More lectures on introduction must be also given. Especially for other participants with no background to catch up with those who know astronomy.

9. Conclusions

ISYA 2013 was a combination of theoretical modelling and observational astronomy including data reduction. Well organized teams were ready. The organizational team was great in providing support, clear communication, and fastly seeking solutions for small daily problems, inherent to the organization of a big event. The solar observation team was clearly well prepared and provided excellent support. The night observation team had made a wonderful set up and was continuously guiding the students through their observing projects.

The offered infrastructure and IT environment was excellent, the accommodation and meals were certainly up to the ISYA standards (though not everybody appreciated the Indonesian food), and the daily organization was smooth and well done.

The organizers, lecturers, and tutors had to deal with a large background spectrum of participants, from students well acquainted with astronomy, to engineers and physics graduates with a keen interest in astronomy.

The students gave useful feedback which will be taken into account in the organization of the future ISYAs.

Taking all the above into account, I consider ISYA 2013 as an excellent event, and I thank all those who contributed to its success.

Jean-Pierre De Greve

03.10.2013

Annex 1:

List of students of ISYA 2013.

LAST NAME:	FIRST NAME:	GENDER:	COUNTRY:
Sriv	Tharith	male	Cambodia
Liu	Nianping	male	China
C P	Mrunalinee	female	India
md.said	noor masdiana	female	Malaysia
Mohd Azhar	Mohammad	male	Malaysia
	Afiq Dzuan		
razelan	mazlina	female	malaysia
Pandey	Apurba	male	Nepal
Divinagracia	Pauline Pearl	female	Philippines
Dela Cruz	Ruby-Ann	female	Philippines
Marigza	Reuel Norman	male	Philippines
Sotelo	Jennifer	female	Philippines
Stephanie	Tumampos	female	Philippines
Thishan Pavithra	Senarath	male	Srilanka
	Arachchige		
Shen	Pei-min	female	Taiwan (R.O.C.)
Chehlaeh	Nareemas	female	Thailand
Kasonsuwan	Kanpatom	female	Thailand
Keeratiparat	Jessada	male	Thailand
Dang Tuan	Duy	male	Vietnam
A Thano	Napaporn	female	Thailand
Huang	Chung Kai	male	Taiwan (R.O.C.)
Rachman	Abdul	male	Indonesia
	Neflia	female	Indonesia
bahar	afrizal	male	Indonesia
Nugraha	Rukman	male	Indonesia
Utama	Judhistira Aria	male	Indonesia
Warsito	Ali	male	Indonesia
	Leonidas		
Tanesib	Jehunias	male	Indonesia
Hasanah	Nur	female	Indonesia
Kurniawan	Eko Setyadi	male	Indonesia
	Kristianto		
Nugroho	Stevanus	male	Indonesia
Wira	I Putu	male	Indonesia
Hadiputrawan	Zamzam		
Nurzaman	Muhamad	male	Indonesia
Husnindriani	Prahesti	female	Indonesia
Taz Sunjaya	Azis	male	Indonesia
Sarnita	Fitria	female	Indonesia

Robiyana	Iqbal	male	Indonesia
Asmoro	Cahyo Puji	male	Indonesia
Hadi Gunawan	Eko	male	Indonesia
Akhyar	Saeful	male	Indonesia
Latif	Nova Amalia	female	Indonesia

Annex 2 :

International School for Young Astronomers 2013

Schedule Program

Date	Day	Time	Activity
Aug 25 th	Sunday	All Day	Arrival
Aug 26 th	Monday	08.00-09.00	Registration
		09.00-10.00	Opening
		10.00-10.30	Break
		10.30-12.30	Public Lecture 1: Thomas Djamaluddin
		12.30-23.30	Lunch
		13.30-15.30	Students Introduction
		15.30-16.00	Break
		16.00-17.00	Michele Gerbaldi: <i>GAIA Space Mission</i>
Aug 27 th	Tuesday	08.00-10.00	Michele Gerbaldi: <i>Stellar Astrophysics</i>
		10.00-10.30	Break
		10.30-12.30	Ikbal Arifyanto : <i>Introduction Advance Astrophysics</i>
		12.30-13.30	Lunch
		13.30-15.30	Michele Gerbaldi: <i>Stellar Atmosphere</i> <i>Star: Fundamental Parameters</i>
		15.30-16.00	Break
		16.00-17.00	Hakim L. Malasan <i>Introduction to Observation</i>
Aug 28 th	Wednesday	08.00-10.00	JP : <i>Binary Evolution</i>
		10.00-10.30	Break
		10.30-12.30	Alexandre Lazarian: <i>Solar Physics</i>
		12.30-13.30	Lunch
		13.30-15.30	Alexandre Lazarian: <i>Solar Physics</i>
		15.30-16.00	Break
		16.00-17.00	Dhani Herdiwijaya, Preparation of Solar observation

		17.00-19.00	Break and Dinner
Aug 29 th	Thursday	08.00-10.30	Solar Observations at Sumedang Observatory
		10.30-12.30	Solar data analysis
		12.30-13.30	Lunch
		13.30-15.30	Solar data analysis
		15.30-16.00	Break
		16.00-17.00	Group Presentation
Aug 30 th	Friday	08.00-09.30	Michele Gerbaldi : <i>Star: Fundamental Parameters</i>
		09.30-10.00	Break
		10.00-11.30	Kam Ching Leung: <i>Globular Cluster</i> <i>Binary Star</i>
		11.30-13.00	Lunch
		13.00-14.00	Philippe Durouchoux: <i>Dark Matter</i>
		14.00-15.00	Philippe Durouchoux: <i>Dark Energy</i>
		15.00-15.30	Break
		15.30-17.00	Labs
		19.00-...	Observations
Aug 31 th	Saturday	08.00-10.00	Philippe Durouchoux: <i>Telluric Planets</i>
		10.00-10.30	Break
		10.30-12.30	Philippe Durouchoux: <i>Extrasolar</i>
		12.30-13.30	Lunch
		13.30-15.30	Lab Work
		15.30-16.00	Break
		16.00-17.00	Labs
		19.00- ...	Observations
Sept 1 st	Sunday	09.00-12.00	Outbond Activities
		12.00-13.00	Lunch
			Free Time
Sept 2 nd	Monday	All day	Field Trip to Kamojang Crater
Sept 3 rd	Tuesday	08.00-10.00	Mamoru Doi : <i>Cosmology</i>
		10.00-10.30	Break

		10.30-12.30	Public Lecture 2 Nat Gopalswamy
		12.30-13.30	Lunch
		13.30-15.30	Mamoru Doi : <i>Cosmology</i>
		15.30-16.00	Break
		16.00-17.00	Preparation of Observation
Sept 4 th	Wednesday	08.00-10.00	Mamoru Doi : <i>Cosmology</i>
		10.00-10.30	Break
		10.30-12.30	Mamoru Doi : <i>Galaxies</i>
		12.30-13.30	Lunch
		13.30-15.30	Lab Work
		15.30-16.00	Break
		16.00-17.00	Preparation of Observation
		17.00-19.00	Break and Dinner
		19.00...	Observations
Sept 5 th	Thursday	08.00-10.00	Michel Dennefeld: <i>Telescope and Instrumentation</i>
		10.00-10.30	Break
		10.30-12.30	Udaya Shangkar : <i>Radio Astronomy</i>
		12.30-13.30	Lunch
		13.30-15.30	Udaya Shangkar : <i>Radio Astronomy</i>
		15.30-16.00	Break
		16.00-17.00	Lab Work
Sept 6 th	Friday	08.00-09.30	Michel Dennefeld: <i>Telescopes & Instrumentations</i>
		09.30-10.00	Break
		09.30-11.30	Udaya Shangkar : <i>Radio Astronomy</i>
		11.30-13.00	Lunch
		13.00-15.30	Student talks
		15.30-16.00	Break
		16.00-17.00	Lab Work
		17.00-19.00	Break
		19.00	School's reception

Sept 7 th	Saturday		Field Trip to Bosscha Observatory
Sept 8 th	Sunday		Art Performance: Saung Udjo
Sept 9 th	Monday	08.00-10.00	Kam Ching Leung: <i>Emission Line Star</i>
		10.00-10.30	Break
		10.30-12.30	Michel Dennefeld : <i>GAIA</i>
		12.30-13.30	Lunch
		13.30-15.30	JP De Greve: <i>Binary Mergers</i>
		15.30-16.00	Break
		19.00...	Observations
Sept 10 th	Tuesday	08.00-10.00	Kam Ching Leung : <i>Emission- Line star</i>
		10.00-10.30	Break
		10.30-12.30	Public Lecture 3 Bambang Hidayat
		12.30-13.30	Lunch
		13.30-15.30	Lab Work
		15.30-16.00	Lab Work
		16.00-17.00	Lab Work
		17.00-18.00	Dinner
		19.00-..	Observations
Sept 11 th	Wednesday	08.00-10.00	Ikbal Arifyanto : <i>Advance Astrophysics</i>
		10.00-10.30	Break
		10.30-12.30	XYZ
		12.30-13.30	Lunch
		13.30-15.30	Lab Work
		15.30-16.00	Break
		16.00-17.00	JP De Greeve Publishing!
Sept 12 th	Thursday	08.00-10.00	Student talks
		10.00-10.30	Break
		10.30-12.30	Thomas Djamaluddin (?): <i>Space Weather</i>

		12.30-13.30	Lunch
		13.30-15.30	Alumni session
		15.30-16.00	Alumni session
		16.00-17.00	Alumni session
		19.00-20.00	Closing Dinner
Sept 13 th	Friday		
		08.00-10.00	Student Talks
		10.00-10.30	Break
		10.30-11.30	<i>reserve</i>
		11.30-13.30	Lunch
		13.30-15.30	Evaluation
		15.30-16.00	Photo show
		16.00-17.00	Break
		17.00-18.00	Closing
Sept 14 th	Tuesday	All day	Departures

Annex 3.**Lecturers and topics.**

	Lecturers	Topic
1	Michele Gerbaldi	Stellar astrophysics
2	Jean Pierre De Greve	Binary Evolution Publishing scientific papers
3	Hakim L. Malasan	Supervisor for Practical Activities
4	Alexandre Lazarian	Solar Physics
5	Kam Ching Leung	Emission Line Star
6	Philippe Durouchoux	Dark Matter, Dark Energy, Extrasolar and Telluric Planets
7	Ikbal Arifyanto	Advance Astrophysics
8	Dhani Herdiwijaya	Supervisor of Practical Activities; Solar Physics
9	Mamoru Doi	Galaxies, Cosmology
10	Michel Dennefeld	Telescopes & Instrumentations
11	Udaya Shankar	Radio Astronomy
12	Thomas Djamaluddin	Space Weather
13	Bambang Hidayat	Public Lecture
14	Nat Gopalswamy	Public Lecture (tbd)

Student presentations : Friday September 6, 13:00 – 15 :00

Chair 1: Philippe Durouchoux

Chair 2: Michele Gerbaldi

		Name	Title
1	13:00	Judhistira Aria Utama	Best time concept on the first lunar visibility
2	13:09	Abdul Rachman	Cluster membership by maximum likelihood method
3	13:18	Afrizal B.	EAR observatory facilities and observations
4	13:27	Azis Taz Sunjaya	HAAJ
5	13:36	Hasan Al Bana	What I do on leisure time
6	13:45	Luthfiandari	Light pollution
7	13:54	M. Zamzam	Some constellations folklore from Indonesia
8	14:05	Mrunalinee	Sundial
9	14:14	Nova A Latif	Astronomy on senior high school
10	14:23	Reuel Norman Marigza	McIntosh Sunspot Classification
11	14:32	Rukman Nugraha	Solar variability effect on precipitation in Indonesia
12	14:41	Saeful Akhyar	The Eclipsing Binaries? Minima (BIMA) Monitoring Project
13	14:50	Wira H.	Observations of visual double stars with speckle interferometry

Annex6. 35th ISYA Evaluation Form

General

		5	4	3	2	1	
The website told me all I needed to know	Strongly agree	12	19	6	1	0	disagree
The application form was easy to fill in	Strongly agree	19	12	5	2	0	disagree
Applications were efficiently handled	Strongly agree	22	11	3	2	0	disagree

Lectures

		5	4	3	2	1	
The lectures were the most useful part of the ISYA	Strongly agree	20	12	4	0	0	disagree
The time spent on the lectures was too long	Strongly agree	1	10	8	2	1	disagree
<i>Or</i> the time spent on the lectures was too short	Strongly agree	2	0	2	1	4	Disagree
<i>Or</i> the time spent on the lectures was just right	Strongly agree	14	10	3	0	0	Disagree
The lectures were at too high a level	Strongly agree	5	9	9	0	0	Disagree
<i>Or</i> the lectures were at too low a level	Strongly agree	0	1	1	1	5	Disagree
<i>Or</i> the lectures were just right	Strongly agree	10	11	4	0	0	Disagree
The lectures were well presented	Strongly agree	19	16	3	0	0	Disagree
The lecturers responded well to questions	Strongly agree	26	8	3	0	0	Disagree
I found it easy to get on with the lecturers	Strongly agree	12	15	9	2	0	disagree
The lecture room at Jatinangor was comfortable	Strongly agree	18	16	4	0	0	Disagree

Observation training

		5	4	3	2	1	
The observation projects were the most useful part of the ISYA	Strongly agree	23	9	6	0	0	disagree
The time spent on observation was too long	Strongly agree	2	4	3	4	2	disagree
<i>Or</i> the time spent on observations was too short	Strongly agree	6	13	5	2	0	disagree
<i>Or</i> the time spent on observations was just right	Strongly agree	7	3	7	3	0	disagree
The lectures did not prepare me adequately for the observations	Strongly agree	3	5	11	7	8	Disagree
It was ok just to learn on observing techniques	Strongly agree	6	10	11	5	5	Disagree
The computing facilities were good	Strongly agree	8	13	12	4	0	Disagree
The help I got with my project was adequate	Strongly agree	9	16	11	1	0	Disagree
I found the tutors helpful and easy to get on with	Strongly agree	19	11	5	2	0	Disagree
The balance between the observing/data reduction part, and lecture part was allright	Strongly agree	10	12	13	3	0	Disagree

Individual and project presentation exercise

		5	4	3	2	1	
The individual student presentations were the most useful part of the school	Strongly agree	14	15	11	0	0	disagree
The time spent on this was too long	Strongly agree	1	0	4	3	4	disagree
<i>Or</i> the time spent on this was too short	Strongly agree	4	4	4	4	1	disagree
<i>Or</i> the time spent on this was just right	Strongly agree	14	8	4	0	1	disagree

This exercise was well organized	Strongly agree	18	14	4	2	0	Disagree
This exercise was interesting	Strongly agree	22	13	3	0	0	Disagree
The project presentations were very useful	Strongly agree	24	12	2	0	0	Disagree
The project presentations were well presented	Strongly agree	14	16	7	0	0	Disagree

Accommodation:

		5	4	3	2	1	
The airport transport was efficiently done	Strongly agree	18	10	5	0	0	disagree
The rooms at Jatinangor were good	Strongly agree	17	14	4	0	1	disagree
The breakfast was good	Strongly agree	12	15	6	3	0	disagree
The meals were good	Strongly agree	12	14	8	3	0	disagree
The organizational support was good	Strongly agree	28	8	0	0	0	Disagree
Generally, the ISYA environment was good	Strongly agree	27	6	3	0	0	Disagree
Jatinangor was a good place to hold this ISYA	Strongly agree	25	7	3	1	0	Disagree

Cultural tours, leisure, and public lectures:

		5	4	3	2	1	
The leisure possibilities after the lectures were good	Strongly agree	22	11	3	1	0	disagree
The Sunday 1 Sep outbond activity was good	Strongly agree	21	13	2	0	0	disagree
The Monday 2 Sep excursion to Kamojong was good	Strongly agree	22	7	8	0	1	Disagree
The field trip to Bosscha Observatory (7 Sep) was fine	Strongly agree	23	10	3	0	0	Disagree
The art performance Saung Udjo on 8 Sep was good	Strongly agree	27	6	3	0	0	Disagree
The public talk by Thomas Djamaluddin on Space Weather was good (26 Aug)	Strongly agree	16	12	9	1	0	disagree
The public talk by Nat Gopalswamy on 3 Sep was good	Strongly agree	15	18	4	0	1	Disagree
The public talk by Bambang Hidayat on 10 Sep was good	Strongly agree	10	16	8	2	1	Disagree
The School's reception on 6 Feb was good	Strongly agree	20	7	5	0	0	Disagree
The closing dinner on 12 Sep was fine	Strongly agree	19	9	8	1	0	Disagree
Generally, this part of the ISYA was good	Strongly agree	23	14	0	0	0	Disagree

The future

		5	4	3	2	1	
I developed an international network as a result of this ISYA	Strongly agree	28	7	1	0	0	disagree
The ISYA helped me to better understand my actual research interests	Strongly agree	22	12	2	0	0	Disagree
The ISYA encouraged me to strengthen my research in astronomy	Strongly agree	26	8	2	0	0	disagree
Through the ISYA I acquired a broader view on the research done in astronomy	Strongly agree	25	8	3	0	0	disagree
I have benefited significantly from attending this ISYA	Strongly agree	32	5	0	0	0	Disagree

