



Amateur Astronomers' Association (Bombay)

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Reg no: Bom-532/77 GBBS Dt. 8-12-77 Under the Societies Reg Act 1860

REPORT OF THE PROGRAMMES HELD SINCE THE LAST ANNUAL GENERAL BODY MEETING

An association's chief reason for existing is to add value to the work of its members. No other reason, however powerful, defines the basis of the formation and continuation of the association. Your association, the Amateur Astronomers' Association (Bombay) (AAA), has tried to keep this in mind over the years. Since the last AGBM, the Association has faced various hurdles that called for a rethink on its way of working.

Initially, lecture sessions were held at least once a month in the College, but the attendance at these lectures began to dwindle to a point of embarrassment for the organisers. Lack of regular attendance at Committee meetings meant that the Association was not able to submit its annual financial statement for the last four years, due to which this meeting is being held after a lapse of four years.

However, despite these constraints, the office bearers of your Association tried hard to ensure that activities went on uninterrupted, so that members could successfully carry out their hobby of amateur astronomy.

A number of alternatives were tried out to overcome the issues faced by the Committee. Since experience taught us that public lectures were no longer drawing even meagre audiences, it was decided to scrap the system of regular lectures once a month, and focus on sky-watch programmes. That idea proved to be successful. To facilitate the smooth conduct of activities, a Working Group comprising Mr Nilesh Vayada, Prof Jyoti Singh, Mr Vernon Fernandes, and Ms Anjane Rao was formed to plan and organise programmes.

Members of the Working Group kept in touch over email and Skype. To this group were later added two more members, Mr Kumar Gaurav and Mr Aaron Mendonsa. The Working Group ensured that the sky-watch and other programmes of the Association went on unhindered, even if regular Committee meetings were not held. Under the auspices of this group, your Association was able to diversify the scope and reach of its programmes.

Alternative venues to hold Committee meetings were also tried out. A meeting of the Executive and Advisory Committees was held at Versova in the western suburbs on 14 June 2014. Committee members felt it would be a good idea to try out this and other similar options in the future.

To conduct regular sky-watch programmes, your Association needed a suitable and safe location where parents would be confident of sending their wards without fear. The location had to be easily accessible by public transport, and offer clear, dark skies for observation. After contemplating various locations, it was found that Kelve village on the western line fulfilled most of these requirements. A recce visit was undertaken at the village by members of the Working Group.

After various locations in the village were examined, the Working Group zeroed in on a school called Adarsh Vidya Mandir, which is situated off the Kelve beach. It is about eight kilometres from Kelve station, three stations after Virar. Fast locals from Churchgate and shuttle services to and from Virar operate regularly. Auto rickshaws are available to ferry participants from the station to the site, and vice versa; the school grounds are secure with good washroom facilities for ladies as well as gents; and tea, snacks and dinner can be sourced from a nearby *dhaba*.

More important, the school is away from the road and highway where weekend tourists tend to get noisy; and the skies, until very recently, were fairly good. We have had to compromise the view just over the horizon on all sides, but we felt this was a fair trade-off. The school authorities were

extremely encouraging; since they were short of funds for development of the school, we came to an understanding that we would offer them a donation of Rs 2000/= for every programme held on their premises. We would also spend the first few hours of the programme interacting with the local school students and teach them about the night sky; they would be shown objects like the Moon, Venus and Jupiter through the telescope. The Association would like to express its gratitude to Adarsh Vidya Mandir, Kelve.

The Working Group felt that it would not be prudent to use the funds from the Association's corpus for this purpose. A 'damages fee' that initially was Rs 150.00 for members and Rs 250.00 for non-members was levied on the participants; this amount did not include travel and food. The collection from this amount served to offset any expenditure incurred on planning the visit. It must be emphasised here that the damages were paid even by the office bearers; only resource persons who were invited to help with the observation were exempt from this payment. Later the amount was increased to Rs 200.00 for members and Rs 300.00 for non-members, and this amount also included the auto rickshaw fare from the station to the site and back.

We owe thanks to Mr Vernon Fernandes who helped us identify this location, and coordinated with the local authorities for the smooth conduct of every single programme held there. We are also grateful to his friend and colleague Mr Ashish Save, a local resident of Kelve, who opened up his home to us and offered us all possible help at the venue. Ashish is not a member of AAA, but without his help we would not have been able to achieve all that we did. Our telescopes were housed at his premises and that eased us from the burden of having to carry the telescopes during each visit.

Mr Nilesh Vayada, Mr Kumar Gaurav and Mr Aaron Mendonsa also deserve thanks for organising these programmes and helping with the training. Prof Jyoti Singh contributed immensely by promoting these programmes among her cross-faculty students; once a year, the St Xavier's College Arts group would join us on a trip to Kelve and bring in a fresh perspective to the study of science and philosophy, at the same time being educated about the majesty of the night sky.

As a result of the help and cooperation of these colleagues, we have been able to carry out a number of sky-watch programmes at Kelve. It was observed that all these programmes attracted a good response; moreover, every time the group comprised different participants, so we were able to diversify our reach and get many more individuals into the fold of amateur astronomy.

Members of the Committee also felt that since participants were paying for each sky-watch trip they attended, and these currently formed the backbone of all the Association's work, it would be unethical to charge an additional membership fee of Rs 400/= per year, particularly since very few participants actually attended more than one or two field trips per year. Hence we stopped accepting new memberships and encouraged interested people to attend the field trips.

Another issue was the collection of snail mail from the Physics Department. Since no new memberships were being accepted, no hardcopy letters of value would be received, and a notice was put up on our website encouraging all correspondence by email. The website has been designed and maintained by Mr Vernon Fernandes, and his efforts are much appreciated.

Since 2014, it was found that the quality of the night sky at Kelve began to diminish due to the development of the village as a tourist site. Huge floodlights and walls that were hitherto absent appeared in and around the premises. As a result we have had to look for alternative premises. Mr Kumar Gaurav has been able to draw on his contacts to identify a place at Dahanu village. Members of the Working Group went on a recce visit during May-June 2015, and the site was found to be suitable. Our telescopes have since been shifted from Kelve to Dahanu, and 2015 observations will now be conducted at Dahanu.

Besides holding sky-watch programmes at Kelve, we also had programmes at other locations. An observation and photography session was held on the College terrace during the total lunar eclipse of 10 December 2011. A talk on 'Our Unique Earth' that was to be given by Dr S G Viladkar, Professor of Geology (Retired), St Xavier's College, and Head, Carbonatite Research Centre, Gujarat, on 21 January 2012, had to be cancelled at the last minute due to unforeseen circumstances. Instead, participants viewed a film and had an informal discussion on amateur astronomy.

A Messier Marathon was conducted at Mr Bhimani's observatory at Ankleshwar on 24 March 2012; this was a precursor to a second Messier Marathon conducted at Kelve on 9 March 2013, where the group collectively sighted 93 objects.

An elaborate programme was planned to observe the Transit of Venus from the College terrace on 6 June 2012. However, the 40-odd enthusiasts assembled on the terrace were disappointed as they waited breathlessly to get a peek of the Sun behind the clouds.

All arrangements were in place to give the Mumbai public a wonderful glimpse of an event that will now take place only in 2117. On hand were telescopes of various sizes, fitted with filters, binoculars with filters and hand-goggles. Our biggest telescope was used to give a foot-wide projection of the Sun on a screen, so that a large number of people could view the transit simultaneously for an extended period of time. Posters warning people not to look directly at the Sun were put up. Paths were chalked out to move from one telescope to the other without disturbing the flow of people. But Nature played spoil-sport as the city was blanketed in a thick cloud canopy.

True to its spirit, your Association stuck to its plan and kept the telescopes up from the start to the finish, although nobody was able to see the actual phenomenon. The efforts did not end there. The audience was given a classroom discussion about the transit, its frequency, the reason why it is interesting and the scientific information that can be drawn out of it. The discussion soon warmed up into a lively interaction, with more questions and many more answers. Team members bore their disappointment stoically, and the public appreciated their efforts for what would have been a splendid event — had not Nature decided otherwise. AAA (Bombay) would like to thank Mr Noshir Mulla for his contribution towards planning and implementing the programme.

Some members were fortunate to be able to view the event from other parts of India. Mr Deepak Bhimani and Mr Aadil Desai presented their observations from Kutch, at a programme called 'Beauty Spot on the Sun', held in the College on 23 June 2012. Mr Bharat Adur also made a presentation at this event.

On 1 March 2014, Mr Bhimani conducted an observation and photography session on the College terrace using a tracker that he had recently acquired. This session was also attended by a group of photography students from Prof Mistry's photography course.

But the greatest recognition of the work of your Association came when third parties began contacting the Committee for programmes on their premises. As usual, the Working Group responded eagerly to these requests, and greatly expanded the reach and visibility of your Association.

Inter University Centre for Astronomy and Astrophysics (IUCAA) in Pune invited your Association to nominate a member to attend a Photometer Fabrication Workshop from 9-13 January 2012. After careful consideration, a member, Mr Sambit Mitra who was a Second Year B.Sc. Physics student at St Xavier's and planning on a career of research in Physics, was identified to attend the workshop on behalf of AAA. Your Association is now in possession of a working photometer.

On 30 January 2012, your Association was invited by Anjuman Khairul Islam Urdu High School, Nalla Sopara, to conduct an evening sky-watch programme. Mr Nilesh Vayada, Mr Vernon Fernandes and Ms Anjanee Rao went to the school carrying telescopes and binoculars. The sky-watch was preceded by a talk about the Solar System. Over 500 eager primary and secondary school students and their teachers gazed in awe at the Moon, Venus in phase, and Jupiter's moons. Subsequently, faculty from the school have been attending our programmes regularly.

In April 2014, we were approached by the Physics Department of Jaihind College, Mumbai, with a request to organise a Certificate Course in Basic Astronomy for the Department. The course would comprise about 10 hours of theory and about 24 hours of practical sessions. The purpose of the course was to add value to the education provided by the college, and was not intended to generate revenue for either Jaihind College or its Department of Physics, or for AAA. The course would be piloted in 2014-15, and if successful, would serve as a model for all future programmes.

Your Association took up the challenge. The theory sessions were planned, costs worked out, and faculty invited. About 15 students registered for the course, some from the Arts faculty. The course

comprised 10 hours of theory sessions, held on all five Saturdays of August, and two field trips at Kelve on 1 November 2014 and 17 January 2015. The entire course was extremely successful, and the college was pleased with our efforts. But that was not all. As an amateur astronomy association, we desired that students pursuing such a programme should not treat it as a one-off academic course. At our insistence, the students formed a Jaihind College Astronomy Club, and are now poised to bring amateur astronomy within the reach of all Jaihind College students. We have been approached to organise the programme this year too; however, since the Astronomy Club is now in place, we have offered to play a mentoring role instead, guiding the students about how to plan the programme and invite the faculty.

Early this year we were approached by the Nehru Planetarium to join hands in promoting serious observational activities with amateur astronomers within the city. We seized the opportunity wholeheartedly, and a programme called DIYA, 'Do-It-Yourself-Astronomy' was born. The programme received enthusiastic response at the start, and is ongoing with about 15 diehard participants who meet once a fortnight at the Nehru Planetarium for theory as well as practical sessions. We owe thanks to Mr Arvind Paranjpye, Director, Nehru Planetarium, for conceiving of this programme and inviting AAA to be a part of it.

A philanthropist from the city was kind enough to donate a 90 mm refractor telescope to your Association. The telescope, along with the Association's existing 8 inch Schmidt-Cassegrain Celestron telescope, is now housed on site at Dahanu village.

After the revival of the Association, a Memorandum of Understanding (MOU) was signed with St Xavier's College for a period of three years on 1 June 2009. This MOU came up for renewal in 2012 and renewal was granted by the College. The MOU came up for renewal again this year, and the office bearers of your Association met the erstwhile Principal of the College, Father Frazer Mascarenhas.

Father Frazer asked for a summary of our activities and was happy with the work of the Association. However, he expressed doubt about signing the MOU since as per law, an institution can have only one registered association on its premises; and the College already has the Bombay St Xavier's College Society. He explained that he had already closed down one of the College's own associations for this very reason. He even checked with the College's legal department and chartered accountant, and on the advice of both parties, suggested that we change our registered address. However, he was extremely magnanimous about the College hosting the Association, and confirmed that we could keep our cupboard in the Physics Department where it is placed currently, and have our programmes as usual. It is only the registered address that needs to be changed.

The office bearers have had two meetings regarding this issue. It was felt that any decision should take into account how the Association plans to position itself in the future, the nature of activities it plans based on the present state of information technology, logistics and sky conditions, and the interests of the members. A number of options were considered; these will be discussed separately at this AGBM.

To sum up, the office bearers of your Association have been striving relentlessly to uphold the name of the Association and bring value to its members through a range of diverse and interesting programmes. The Committee has tried to shield the members from the various logistical and operational constraints it faced, so that the ultimate winner is amateur astronomy.

DATEWISE LIST OF PROGRAMMES HELD SINCE THE LAST ANNUAL GENERAL BODY MEETING

Date	Programme
Saturday, 19 November 2011	Sky-watch, observation of Leonids and astrophotography at Adarsh Vidya Mandir, Kelve
Saturday, 10 December 2011	Lunar eclipse observation and photography on St Xavier's College terrace
Saturday, 21 January 2012	Film and informal discussion (in lieu of talk by Prof Viladkar) at St Xavier's College
Monday, 30 January 2012	Outreach programme at Anjuman Khairul Islam Urdu High School, Nalla Sopara, Mumbai
Saturday, 25 February 2012	Sky-watch and astrophotography programme at Adarsh Vidya Mandir, Kelve
Saturday, 24 March 2012	Sky-watch and Messier Marathon at Mr Bhimani's observatory at Ankleshwar
Saturday, 21 April 2012	Sky-watch, observation of Lyrids and astrophotography at Adarsh Vidya Mandir, Kelve
Wednesday, 6 June 2012	Observation, photography and discussion about Transit of Venus from College terrace
Saturday, 23 June 2012	'Beauty Spot on the Sun', an account of the Transit of Venus at St Xavier's College
Saturday, 5 January 2013	Sky-watch at Adarsh Vidya Mandir, Kelve, dedicated to the memory of Neil Armstrong who died on 25 August 2012
Saturday, 9 February 2013	Sky-watch and astrophotography at Adarsh Vidya Mandir, Kelve. Participants included cross-faculty students of St Xavier's College
Saturday, 9 March 2013	Messier Marathon at Adarsh Vidya Mandir, Kelve, 93 objects sighted collectively
Saturday, 13 April 2013	'Astrophotography Special' at Adarsh Vidya Mandir, Kelve
Saturday, 4 January 2014	Sky-watch and astrophotography at Adarsh Vidya Mandir, Kelve
Saturday, 1 March 2014	Discussion, observation and photography session by Mr Deepak Bhimani using a 'tracker', on St Xavier's College terrace
Saturday, 29 March 2014	Messier Marathon at Adarsh Vidya Mandir, Kelve

Date	Programme
Saturday, 5 April 2014	Sky-watch and astrophotography at Adarsh Vidya Mandir, Kelve
All Saturdays of August 2014	Theory sessions for 'Certificate Course in Basic Astronomy' at Jaihind College
Saturday, 1 November 2014	Solar observation and sky-watch for Jaihind College students at Adarsh Vidya Mandir, Kelve
Saturday, 17 January 2015	Sky-watch for Jaihind College students and cross-faculty students of St Xavier's College at Adarsh Vidya Mandir, Kelve



Students and teachers from Adarsh Vidya Mandir, Kelve, line up to get a glimpse through the telescope

(Report prepared by Ms Anjaneer Rao, Programme Coordinator, AAA-Bombay)

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