

Astronomy has a huge following among Puneites



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Despite the fact that Pune did not have a historical tradition of astronomy being patronised by reigning maharajas, the city has yet emerged as a center of excellence for studies in astronomy and astrophysics in the last two decades.

This has been primarily due to two factors - the establishment of the Inter University Centre for Astronomy and Astrophysics (IUCAA) inside the Pune University campus in 1988; and the setting up of the Giant Metre-wave Radio Telescope (GMRT) by the National Centre for Radio Astrophysics (NCRA) of the Tata Institute of Fundamental Research (TIFR) at a place near Narayangaon, about 80 kms from Pune.

The IUCAA provides centralised facilities to all scholars from Indian universities, and also from abroad, to study astronomy and astrophysics, it has emerged as a leading centre for research in a wide range of areas in astronomy and astrophysics. The GMRT is the most powerful radio telescope in the world operating at low radio frequencies.

Naturally, both the facilities

draw astronomers and astrophysicists from across the world. In fact, the work at these facilities have already led to several significant discoveries.

However, it is the presence of the founding fathers of these facilities - Dr Jayant Narlikar who established the IUCAA and Dr Govind Swaroop, the first head of the GMRT - that gave Pune an edge over other centres.

It was particularly Dr Jayant Narlikar's evangelism that led to popularising of astronomy and taking the subject to the people, especially children, through the means of IUCAA's amateur astronomers club, the Khagol Vishwa.

But the pioneering effort in popularising astronomy goes to the Jyotirvidya Parisanstha of Pune, which was established in 1944 and is the oldest amateur astronomers association in India.

Apart from these two organisations, there are other private clubs like the Akashmitra, the Mitra Association of Young Astronomers, the Sky Watchers' Association of Pune (also known as SWAP) and other smaller clubs.

These clubs and associations saw a flurry of activities last year as public interest grew and the world celebrated 2009 as the International Year of Astronomy.

Star Status >> P2


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Star Status

Despite the presence of noted institutions like the National Centre for Radio Astrophysics and the Inter-University Centre for Astronomy and Astrophysics, Pune might not have developed a dynamic culture of pursuing astronomy as a career or as a hobby. **Sakaal Times** finds out from the enthusiasts

PUNE CAN SET AN EXAMPLE



Arvind Paranjpye

Talking about amateur astronomy in India, Pune has two firsts: it hosts the first working planetarium, at the top floor of the New English School on Tilak Road and has the oldest amateur astronomer's association, Jyotirvidya Parisanstha again on Tilak Road in the premises of Tilak Smarak Mandir. Today the city has many associations, such as Akashmitra and Khagol Vishwa (Pimpri Chinchwad) and many in schools and colleges. However, the real boost to 'amateur astronomy movement' Pune got was when two premier astronomy institutions started working here, the National Centre for Radio Astrophysics (NCRA) and Inter-University Centre for Astronomy and Astrophysics (IUCAA), next to each other in the campus of the University of Pune. The IUCAA, in particular, plays a proactive role. But did the amateur community make full or good use of this opportunity? The answer is both Yes and No.

By definition, the word 'amateur' (in the good sense of its meaning) is the person who engages in an activity for pleasure rather than for financial benefit. Across the world,

the amateur astronomers engage themselves in various astronomy-related activities — understanding the subject of astronomy from experts to teaching novices; from making telescopes to taking observations and the like. In Pune, the amateur astronomers have utilised the two premier institutions by organising lectures by scientists/astronomers of these institutions, or of those who visited these institutions both from India and abroad. Some of the amateurs visited these institutions for their academic projects also. Almost from the beginning, the IUCAA had a committee for Public Outreach Programme that played a proactive role. I have been in the committee, and participated in large number of public activities — from organising lectures by eminent speakers to con-

ducting the star parties organised by amateur associations or helping them to organise such events. In the mid 1990s, I initiated telescope-making workshops. I am glad that individuals like Tushar Purohit have serious interest in amateur telescope-making.

However, there's a lack of any other serious activity. About a decade ago, a group of amateurs took serious interest in observing the meteor shower — their observational data was regularly published on the sites of international data centres. Some of the amateurs are authors of a scientific paper published in the *Bulletin of Astronomical Society of India*. One amateur astronomer Harshad Abhyankar internationally ranks as one of those few who observed 109 out of 110 objects of a catalogue called Messier

Objects in one night. But barring these few exceptions, hardly any serious and regular work is undertaken.

The story is not quite different in the other parts of the country. I personally feel that amateur astronomers of Pune and greater Pune should set an example to the rest of the country by taking one step forward and engaging into serious observations. They don't really need help from the professional institutions though these are there to help, if needed. And for the general public, a good planetarium that works at least 4x7 is overdue for this city. This city craves for knowledge and I am certain that no planetarium show will ever go empty.

(The writer is scientific officer, Public Outreach Programme, Inter-University Centre for Astronomy and Astrophysics)

PUNE'S ASTRONOMY HERITAGE

Pune has remained a vital hub of astronomical observations since the late 19th century. In 1882, K D Naegamwala, then a teacher at the Elphinstone College in Mumbai, found that Pune skies are better than that of Mumbai for astronomical observations. So, he chose the city to house the country's largest telescope (as it was then) — a 20-inch Grubb reflector. The Maharaja of Bhavnagar, Takhtsinhji, then had given a Rs 5,000 grant for this telescope. Known as Bhavnagar Telescope, this remained the largest telescope in India for nearly eight



Very few opt for a career in astronomy

Deepak Joshee,
secretary, Jyotirvidya Parisanstha

For amateur astronomers, our institute conducts basic course which includes star gazing, telescope making, astrophotography and observations. The course has no age bar and after completing it, one can get into star observation on his own.

But there is a difference between a hobby and taking up astronomy as career, which very few people opt for. Some of the reasons could be less opportunities in India and tough entrance test for its post-graduation programmes. But now, more opportunities are also available in the city, as well as elsewhere in the country. The Inter-University Centre for Astronomy and Astrophysics (IUCAA), and National Centre of Radio Astronomy (NCRA) in Pune, the Tata Institute of Fundamental Research (TIFR) in Mumbai are some of the institutions which run the post-graduation courses in astronomy.



Climate, institutes and academics help

Chetan Khalkar,
software professional

I think Pune's atmosphere favours astronomy and astrophysics. The climate conditions in Pune are never extreme, which enable observations on the outskirts of the city. This is very helpful for research activities. We also have the Inter-University Centre for Astronomy and Astrophysics (IUCAA) which has major contribution in research activities. Collaborative seminars are held to exchange the observations made by each institute, and the students get a broader view about the subjects. Pune can also boast of noted scientist-academics like astrophysicist Jayant Narlikar and Professor T Padmanabhan of the IUCAA. It will be extremely helpful for students to have the guidance from such people. The University of Pune library has an extensive collection of useful books and journals to help in research works in this field.



School astro clubs give a boost

Tushar Purohit,
joint treasurer, Akashmitra

The curiosity and interest among students in astronomy has increased considerably during the past few years. People, particularly children, watch science-related channels like the *Discovery* and *National Geographic*. Children studying in 8th to 10th standards also study material on astronomy and science. All these factors collectively have boosted popularisation of astronomy. Clubs like Akashmitra and astro clubs set up at various schools, also play a major role in creating enthusiasm about this science. We conduct various events of sky gazing, lectures and telescope-making workshops for school children. The technical knowledge, which they get through books is supplemented with practicals at the workshop. We have prepared a new telescope model through which children can observe moons of Jupiter and rings of Saturn.



No coaching facility for the Olympiad

Sarthak Chandra,
winner of International Astronomy Olympiads

For those interested in knowing the facts and developments in the universe, there is a great scope in astronomy. I want to make a career in astronomy. It's an interesting subject and in Pune there are groups like Akashmitra, libraries and an institution like the Inter-University Centre for Astronomy and Astrophysics to help and guide amateur astronomers. As far as competitions like astronomy Olympiad are concerned, there is, however, no specific coaching available. Students have to train on their own, with guidance from the experts and concerned teachers. During the first two rounds, the main focus is on physics and for the third round of the olympiad, students have to be skilled exclusively in astronomy and that requires specialised guidance.

(INPUTS FROM Supriya Shelar, Shashwat Gupta Ray, Priyanka Deshpande and Komal Sagare)



No infrastructure to support amateurs

M C Uttam,
Director, Space Technology Cell, University of Pune

The general observation is that Puneites have very high awareness levels regarding astronomy. Personalities like Jayant Narlikar (former director, IUCAA) and late V G Bhide (former vice chancellor of Pune University) through their research works and various initiatives have helped in spreading awareness. We have institutes for high quality advanced research, however the infrastructure to support amateur astronomy is still not very organised in the city. There are individuals with high knowledge levels but they are scattered. Good schools and colleges in the city can play an important part. They have teachers and funds. They need to upgrade their facility. They can play a stellar role in guiding amateur astronomers.

telescope in India for nearly eight decades.

Also, Jyotirvidya Parisamstha is India's first amateur astronomers' association. It was founded in 1944.

Interestingly, the honour of having country's first planetarium also goes to Pune. Housed at the Deccan Education Society's New School building, this planetarium and its instruments are part of Pune's rich heritage. Though no Deccan Education Society office bearer could be contacted to shed light on the present state of the planetarium, sources close to the Society said that it has been trying to revive the now-defunct planetarium for some time. IUCAA takes planetaria to students' doorsteps using the two mobile planetaria it has. The IUCAA also organises field trips for students and other astronomy enthusiasts to its newly built observatory at Giravali near Bhimashankar.

The Giant Meterwave Radio Telescope (GMRT) too invites science enthusiasts to see its giant telescope project at Khodad on the National Science Day, celebrated on February 28 every year.

The Pune Municipal Corporation, a few years back, had planned to gift this city with a planetarium. This planetarium, promised to suit the city's grandeur, was supposed to come up on a Kothrud land that city used as its garbage dump for years together. However, scuttled by political one-upmanship, this ambitious plan never progressed.