

# Role of Amateur Astronomy in India to Popularize Astronomy

S. Chatterjee Chinsurah, WB, India somenath79093@yahoo.co.in

Please make sure that your pdf conversion results in a document with a page size of 237 x 180 mm!

## Abstract

Astronomy was originated by people who practiced astronomy passionately for agriculture and religious rituals. Priests in most cases were responsible to study astronomy for the sake of interest of common people. These priests were recognized by the societies as astronomers. In India, the role of amateur astronomers is significant. In the early 20<sup>th</sup> century, there have been several efforts of amateurs at observing solar eclipses and events like transit of Venus. From classical period, observations were made sincerely by few astronomers like Āryabhat, Bhāskara I, Brahmagupta, Bhāskaracharya etc.

In the year of 1609, the optical telescope was discovered in the western world and its use by Galileo revolutionized the study of astronomy. Father Richaud, a French Jesuit priest was the pioneer of using small telescope in India in the year 1689. He discovered a comet and the binary nature of the bright star alpha-Centauri from Pondichery. Next important landmark was the work of Swai Jai Singh II. He constructed five masonry observatories to get accurate results. After these observatories construction astronomy started to become popular in India. The first modern observatory was established in Madras by the British East India Company in 1792. Nawab Zafar Jung's interest in astronomy led him to establish the Nizamiah observatory. At Vizagapatnam, A.V. Narsingh Rao with a 6 inch telescope made observation of the transit of Venus and Mercury and observed many bright comets. The work of amateurs in the study of variable stars is considerable. The pioneer in the study of variable stars was Radha Gobinda Chandra from Jessore who from 1919 until the late forties was a regular contributor to American Association of Variable Star Observer (AAVSO). In 1910, a few amateurs decided to form a society which was called the Astronomical Society of India. There has been an increase in the

number of active amateur astronomy groups in the third quarter of the 20<sup>th</sup> century. The most active groups are in Mumbai, Kolkata, and Chennai etc. Mumbai Amatuer Astronomers' Association was started in 1976 with R V Kamnath as the president of the association. Amatuer astronomy is also encouraged in universities, institutions to popularize astronomy in India.

## 1. Introduction

This is the introduction section of your paper. All section headings are in a large bold font. All sections and subsections should be numbered, respectively. In order to guarantee the correct formatting of section and sub-section titles, please use the auto-formatting styles "Section\_heading" and "Subsection\_heading", respectively, provided in this document.

### 1.1 Sub-section

This is the example of a sub-section. It should be numbered in the way as shown above in the heading. Use the auto-formatting style "Subsection\_heading" in order to have it correctly formatted.

## 2. An additional section

You will find an example of how to include your Reference list at the end of this file. You may cite all references with [1], [2], [3], etc. The reference list should be in an alphabetical order. All references in the bibliography list should start with the reference number being put in square brackets. Needless to say, the reference list should be put at the end of your paper. Please make sure to use the auto-formatting style "References" in order to guarantee the correct formatting of the list. For the section heading "References", just use the regular "Section\_heading" auto-formatting style.

### 3. Figures

Below, you will find an example of an included figure. You should use the “Figure\_caption” auto-formatting style for the caption.



Figure 1: This is the example of an included figure.

### 4. Tables

You will find a sample of an included table below.

Table 1: This is the example of an included table

Column 1	Column 2	Column 3
Line 1	Line 1	Line 1
Line 2	Line 2	Line 2
Line 3	Line 3	Line 3
Line 4	Line 4	Line 4
Line 5	Line 5	Line 5
Line 6	Line 6	Line 6
Line 7	Line 7	Line 7
Line 8	Line 8	Line 8
Line 9	Line 9	Line 9
Line 10	Line 10	Line 10
Line 11	Line 11	Line 11

## 5. Equations

Below, you will find examples of two equations. You should use an equation editor of your word-processing program in order to include your equation(s). The equation number should be placed at the right side of the column and all equations should be consecutively numbered.

$$a^2 + b^2 = c^2 \quad (1)$$

$$E = m \cdot c^2 \quad (2)$$

## 6. Summary and Conclusions

After having finished your paper in your word-processing program, please create a respective pdf file out of the document. The correct page settings of 237 (height) x 180 (width) mm are included in the template document. **Please make sure that the generated pdf file actually has a page size of 237 x 180 mm.** This is the only way to guarantee the proper inclusion of your paper in the Copernicus Office database. Please note that you are asked to upload a pdf file during the abstract submission in Copernicus Office. No other file type than .pdf is accepted for the file upload. The actual citation header will be added automatically!

## Acknowledgements

The Acknowledgements section should not be numbered. Here, you may include all persons or institutions which you would like to thank. We recommend that the abstract is carefully compiled and thoroughly checked, in particular with regard to the list of authors, **before** submission.

## References

- [1] Author, A., Author, B., and Author, C.: First example of a cited article title, First Example Journal, Vol. 1, pp. 1-100, 1999.
- [2] Author, D. and Author, E.: Second example of a cited book, Example Publishing House, 2000.
- [3] Author, F.: Third example of a cited conference paper, The Great Science Conference, 1–7 February 2001, Sciencetown, Sciencecountry, 2001.