

models were also discussed at this Conference. But it is difficult to say what significant progress we have made at this point.

Finally, it is worth pointing that the galactic background gamma ray studies are poised to make a significant contribution in propagation problems, because the spatial distribution of such energetic gamma rays arises essentially as a product of C.R. intensity and matter density in the Galaxy along the line of sight. A few papers highlighting such possibilities were also presented at this Conference.

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ROUND TABLE CONFERENCE ON 'TRAINING REQUIREMENTS OF ASTRONOMERS IN INDIA'

At the invitation of the Centre of Advanced Study in Astronomy (CASA), a representative group of Indian astronomers from various astronomical institutes and universities in India met in the Astronomy Department of Osmania University between December 27-30 to discuss the 'Training Requirements of Astronomers in India'.

The conference was inaugurated by Professor V.R. Srinivasan, Principal, University College of Science, O.U. on the morning of December 27, 1977. The Current Teaching Programmes in the Indian Universities were reviewed in the afternoon. The morning of December 28 was devoted to the consideration of the Requirements of Astronomical Institutes as put forward by the delegates from such institutes. The whole of December 29 was utilized in the discussion of Required Teaching Programmes and Contents of Syllabii. The Osmania University syllabii for the proposed (i) Two-year M.Sc. course in Astronomy and Astrophysics, (ii) The one year Post M.Sc. Diploma course in Astrophysics and Space Science and (iii) The M. Phil course were scrutinised thoroughly on the morning of December 30. The deliberations of the conference were summarised at the same session through a series of recommendatory resolutions which are given below :—

Resolution No. 1

Considering that Astronomy is a part of the cultural heritage of humanity from the most ancient to the most modern times and taking into account the fact that the subject of Astronomy was very well developed in ancient times in India while it has been neglected during the last several decades, it is recommended that Astronomy should be included in the curriculum of Colleges and Universities as well as in those of High Schools and Higher Secondary Schools, which is the practice in most foreign countries. The inclusion of Astronomy in the Physics curriculum of the higher secondary stage by the NCERT is a right step in this direction, which is appreciated by this conference.

Resolution No. 2

As the subject of Astronomy and Astrophysics has grown tremendously since the beginning of this century, it should form a separate discipline with an independent Department in at least a few Universities spread out in different parts of India—besides Osmania University which already has a separate Astronomy Department. As man-power needs of observatories, research institutes, teaching departments, planetaria etc., is estimated to be 20-25 per year for the next 5-10 years, these Universities should take up teaching of Astronomy at M.Sc. and post M.Sc. level and the UGC should support them with financial help for staff and equipment.

Resolution No. 3

It is desirable that Astronomy should be taught as one of the subjects in the Physical Sciences group at undergraduate level in all Universities as a separate subject on par with other subjects like Physics, Mathematics, etc. In the meanwhile, the subject of Astronomy should be introduced as a part of Physics or Mathematics in B.Sc./B.Sc. honours courses and also as a specialization in Physics and Mathematics at M.Sc. level. As a beginning in this direction, one or two courses of Astronomy should be included in the Physics and Mathematics curriculum of B.Sc. and M.Sc. The UGC should give adequate support for these innovations by the Universities.

Resolution No. 4

Due to the paucity of qualified staff to teach Astronomy at undergraduate and school level, CASA and other institutions should conduct separate Summer Schools : (i) for college and University teachers of Physics and Mathematics and (ii) for High School and Higher Secondary Teachers of Science, to acquaint them with important topics in Astronomy.

Resolution No. 5

As books and teaching materials in Astronomy are not available in India, the senior Astronomers are urged to write suitable books of school, undergraduate and post-graduate standards and the observatories are requested to prepare suitable teaching materials and laboratory exercises which will be useful for them.

Resolution No. 6

Since every institution cannot afford to have a good library in Astronomy and material on Astronomical education, a clearing house should be set-up, for instance, to start with at CAS in Astronomy, Hyderabad so that other centres may get from this clearing house on loan or otherwise this material and the UGC should provide a special fund for this purpose.

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