

Editorial

Stars have been observed for ages. It is only recently that we have been able to study the interiors of the stars. Stars oscillate, exhibiting pulsations – different stars pulsating in different ways – and the study of the interiors of stars by studying these pulsations is termed ‘Asteroseismology’ similar to the seismology of Earth where the Earth’s interior is studied by studying the oscillations during an earthquake.

There are several stars which exhibit pulsations: the classical Cepheids, the Sun, rapidly oscillating Ap stars, δ Scuti variables, β Cep stars, white dwarf variables, sub-dwarf B stars, and the list goes on. For some stars, the observations and theoretical interpretations have been going hand in hand, whereas for some, theoretical explanations of observed frequencies is currently not possible, and in some others observations indicate a lack of oscillations where they are theoretically predicted. It was therefore appropriate that a workshop on this topic be held in India to discuss the current maturity in the field and understand as many types of stellar oscillators as possible.

The fifty-year-old observatory, presently known as ARIES has a rich history of observations of such types of stars. In 1997, the Nainital–Cape Survey program to search short period (4 to 21 minutes) intrinsic variables in chemically peculiar stars was initiated at ARIES. To mark the Golden Jubilee celebrations of the Institution therefore, it was befitting that the workshop was held at ARIES.

The **ARIES International Workshop on Asteroseismology** was held at the Uttaranchal Academy of Administration, Nainital during December 6th – 8th, 2004. It was organized by Aryabhata Research Institute of Observational Sciences (ARIES), Manora Peak, Nainital, an autonomous institution under the DST, Govt. of India. This workshop was the first one organized by ARIES at an international level.

This special issue of the *Journal of Astrophysics and Astronomy* published by the **Indian Academy of Sciences**, Bangalore comprises a collection of refereed and accepted papers based on the presentations in this workshop. Our thanks are due to all the referees.

We thank the members of the Scientific Organizing Committee for their advice in identifying the invited speakers and for their valuable suggestions in drawing up the scientific program of the workshop. In particular, our grateful thanks to Prof. D. W. Kurtz who played a central role in bringing together speakers from all over the world and in the organization of the workshop.

This workshop was made possible by the generous financial support from the Department of Science & Technology, Govt. of India, New Delhi. We have received outstanding support from all members of ARIES, Uttaranchal Academy of Administration and local authorities of Nainital district for the successful organization of this workshop.

As with any workshop, the participants were the backbone. We thank all the participants for accepting our invitation. Hosting this workshop was an exciting and beneficial experience for us. We trust the participants experienced the same.

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Guest Editors