



## Editorial

The Square Kilometre Array (SKA), when completed, will be the largest radio telescope in the world. The project is funded by an international collaboration consisting of more than a dozen countries across the world. The design of the facility has recently been completed and it has now entered the phase of construction. By the end of this decade, one expects the telescope to be largely complete and producing excellent scientific results.

India, with its rich history in radio astronomy, is a natural partner in building the SKA. In fact, the country has been connected with the SKA from its very early days. India played important roles in the design phase of the project and hopes to continue its involvement during the construction. At present, the proposal for joining the construction and operation of the SKA is being reviewed by the Government of India.

The SKA-India science community has been involved in most of the scientific areas relevant to the project. The community has been fairly active in updating their science cases on a regular basis since the formation of the Science Working Groups in 2014. Their most notable contribution was the SKA special issue in *Journal of Astrophysics & Astronomy* in December 2016. Following that, the science cases were updated around 2018–19 while preparing the detailed funding proposal for the full SKA which was submitted to the Indian Government.

As a natural follow up of these activities, towards the end of 2021, it was felt that a more substantial update of the science cases would be timely. To this end, it was proposed that another SKA Special issue be brought out in JoAA. The idea was to showcase the potential Indian contributions in the SKA and also highlight some of the achievements with SKA precursors and

pathfinders. It was also decided that the Special issue could be extended beyond the science-related articles to include some on the activities in technical areas, education and public outreach. This would allow the wider astronomy community to appreciate the contributions made by India in the technical development of the telescope.

The present special issue, titled ‘Indian participation in the SKA’ contains about 30 articles covering a wide range of topics, both scientific and technical. Most of these articles are reviews of the relevant fields. We have tried to ensure that the review articles have long-term utility and can be used as go-to references for researchers working in that area. In addition to the reviews, there are several articles which contain original unpublished results. We hope the readers will find them useful for learning more about the SKA.

We thank the Chief Editor of JoAA, Prof. Annapurni Subramaniam, for initiating the idea of this special issue and helping us along the way. We also thank Ms. Shylaja and members of the Editorial team at JoAA for making this issue possible. Special thanks to all the contributors who have stuck to the timelines imposed on them in spite of their busy schedules. We also express our gratitude to all the anonymous referees who have helped us in maintaining the quality of the articles.

The next few years are going to be exciting for all the astronomers as the telescope gets ready for operation. We look forward to many scientific and technical achievements from the SKA-India community.

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