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SKA Press Release

The Government of India has accorded its approval for India's participation in the international mega science project, Square Kilometer Array (SKA), at an estimated cost of ₹ 1250 Cr. This approval covers funding support for the construction phase of the international SKA Observatory (SKAO) spread over the next 7 years. The project will be jointly funded by the Department of Atomic Energy (DAE) and Department of Science and Technology (DST), with DAE as the lead agency. The Indian participation in SKA is a truly nationwide, inclusive project led by a consortium of more than 20 academic and research institutes (with NCRA-TIFR as the nodal institute).

SKA is a state of the art, mega science international facility to build the world's biggest and most sensitive radio telescope for addressing a wide variety of cutting-edge science goals. The SKAO, collocated in Australia (SKA-Low) and South Africa (SKA-Mid) with operational headquarters in the UK, is expected to revolutionize radio astronomy, while driving the growth of many important new state-of-the-art technologies. Subsequent to this approval, India will be signing the SKAO treaty to become a full-fledged member of the SKA Observatory and thus join the growing list of countries participating in the project.

During the design phase of the SKA (2014-2020), India has contributed actively to the project, with a lead role in the successful design of the complex Telescope Manager system. In the subsequent early prototyping phase, India was actively engaged in three areas of work namely Telescope Manager Package, SKA-Low digital hardware package and Science Data Processor work package. India will not only continue its leadership role in the construction of the expanded Telescope Manager, renamed as the SKAO Observatory Monitor & Control system but will also contribute to the other work packages.

India's membership in SKAO will enable the large-scale participation of Indian industry not only for fulfilling our commitments towards in-kind contributions but also in other open tenders that may be floated by the SKAO. Participation in this project will open up possibilities for development of niche skills in Indian industry and research organizations in different areas of next generation technologies, such as modern antenna design, sophisticated cryogenic receiver systems, high volume optical fibre data transport technology, state-of-the-art digital signal processing systems, high performance super-computing technologies, big data archival and analysis techniques, modern end-to-end system management hardware and software, artificial intelligence and machine learning algorithms.

The approval for India's participation in this project underlines the emphasis laid by the Government of India on basic, applied and advanced science research. Earlier during the year, the Government of India committed a $140 million in-kind contribution from DAE to the U.S. Department of Energy's (DOE's) Fermi National Laboratory towards collaborative development of the Proton Improvement Plan-II Accelerator and has also approved the DAE-led LIGO-India project at a cost of ₹ 2600 Cr.

for

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