

The Square Kilometre Array: Big Telescope, Big Science, Big Data

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The first decades of this century has seen a tremendous advance in information and digital technologies impacting scientific inquiry. Data being created by global projects in science and engineering, by the ubiquitous sensors tracking the state of the planet, by the connected internet of things, and by vast and complex collections of meta data that trace the patterns and trends in human behaviour are beginning to be creatively mined in ways that fundamentally change our perception of the world and empower global change.

The Square Kilometre Array, one of the largest scientific projects ever undertaken, has harnessed these advances to create one of the biggest data challenges in science of the coming decades. Under development by an international consortium of thirteen countries, it is one of a suite of future global flagship projects designed in consort to answer our biggest questions about the universe. The SKA is coming to Africa to be hosted by an eight-country African partnership. The MeerKAT telescope just completed in the Great Karoo is the first element of the SKA and marks the beginning of the new era big data in African astronomy. A new generation of researchers working at the forefront of data science and multi-wavelength astronomy will be critical to African leadership in the SKA science enterprise.

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Session Classification: Exploring Connections: The Multiwavelength Sky

Track Classification: Future Missions/Instruments