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国台学术报告NAOC COLLOQUIUM

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Time: Thursday 2:30PM, Apr. 24 Location: A135 NAOC

Recent Results from the Australian SKA Site

Prof. Lister Staveley-Smith (ICRAR & CAASTRO)



Professor Lister Staveley-Smith is the Science Director at ICRAR (International Centre for Radio Astronomy Research) and Deputy Director of the ARC Centre of Excellence for All-sky Astrophysics (CAASTRO). He completed his PhD in Astronomy and Astrophysics at the University of Manchester in 1985, before taking up a Postdoctoral position there. He came to Australia in 1987 as the SERC/PPARC Bicentennial Fellowship at the Anglo-Australian Observatory and then worked at the Australia Telescope National Facility in Sydney, in 2004 becoming Director of Gemini and SKA Major National Research Facility. He was appointed Deputy Director of ICRAR in 2009. His research is oriented towards deep HI and continuum surveys, cosmology, dark flows, galaxy kinematics, intensity mapping. He is the project scientist for the Parkes multibeam receiver that undertook the HIPASS survey, discovered more pulsars than any other telescope and discovered all of the published fast radio bursts. Through his research he is preparing the path for the next generation of telescopes and instruments such as the SKA and its precursors, the Australian Square Kilometre Array Pathfinder (ASKAP) and the Murchison Widefield Array (MWA).

Abstract

The Australian SKA Pathfinder (ASKAP) and the Murchison Widefield Array (MWA) are the two



SKA precursor on the Western Australian site. The CSIRO ASKAP telescope is testing new phased array feed technology and will be the most powerful survey interferometer until the SKA. I will show some early results, summarise the science goals of the telescope and its relation to phase 1 of the SKA. MWA has already begun scheduled operations. I will summarise the science goals of the telescope, including the EOR and the GaLactic and Extragalactic All-sky MWA (GLEAM) survey for which I am principal investigator. GLEAM will investigate low-frequency emission from clusters, the cosmic web, relic radio galaxies, diffuse Galactic polarised emission, the Magellanic Clouds, nearby galaxies and Supernova Remnants. The ongoing execution of the GLEAM survey allows an interesting glimpse into the algorithmic and dataflow challenges that await us when other sensitive widefield instruments such as FAST and Phase 1 of the SKA come on-line.

All are welcome! Tea, coffee, biscuits will be served at 2:15 P.M.