

Seminar

Friday, 26th November 2010

11 am - Room 701

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SKA capability development in New Zealand: Radio Astronomy

The Square Kilometre Array (SKA) is the world's greatest radio telescope, to be built in the Southern Hemisphere in 2016-2025. New Zealand is one of 19 nations working on this mega-science project and one of three countries that may eventually co-host the SKA. The development of radio astronomy in New Zealand stretches back to 1940s when Elisabeth Alexander discovered the "Norfolk effect" and John Bolton and Gordon Stanley for the first time identified "radio stars" with optical galaxies and SNRs. The new stage in New Zealand radio astronomy started in 2005 with successful "very long baseline interferometry" (VLBI) observations between the 6-m Brent Addis' radio telescope (BART) and Australian radio telescopes, which obtained the first NZ radio map of Sgr A. Erection of the first professional 12-m radio telescope in Warkworth allowed broadening the spectrum of radio astronomical observations dramatically.

Here I report on recent spectroscopic observations of interplanetary spacecraft, determination of the He abundance in the ISM from radio recombination lines, single-dish observations of HII regions and SNRs, VLBI observations of the radio galaxy (Cen A), quasar (PKS 1934-638) and X-ray binary star (Circinus X-1). The role of radio astronomy in geosciences (eg tectonic plate monitoring and earthquake prediction) is discussed. An important announcement will be made, and future steps in New Zealand development towards SKA outlined.

All Welcome

Contact Details

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