



Southern Africa Association for the Advancement of Science
Suider-Afrika Genootskap vir die Bevordering van die Wetenskap

Public Lecture Series

The Square Kilometre Array

The world's largest radio telescope is to be built in Africa!



The first of the planned 64 MeerKAT antennas erected outside Carnarvon, Northern Cape. The dish has a diameter of 13.5 m while the total structure is 19.5 m high and weighs 42 tons. (Credit: SKA South Africa, www.ska.ac.za)

Speaker: Roy Booth

Professor of Physics, University of Pretoria,
previous Associate Director: Science and Operations, SKA South Africa.

On: Wednesday, 21 May 2014

At: 17:15 (to 18:15)

Venue: Sci-Enza, Hatfield Campus, University of Pretoria

(Note: Please use the Prospect Street entrance. See
<http://s2a3.org.za/directions.php> for directions and a map.)

The Square Kilometre Array (SKA) is a major international project to build the world's largest radio telescope, by far, with collecting area of a square kilometre – achieved by bringing together many hundreds of antennas and dipole arrays to cover a frequency range from metres to centimetres (if the final phase is ever built). The major, mid frequency, array will be built in Africa, the core being in the Karoo region of South Africa. The low frequency component of the array will be built in Western Australia. Both sites were chosen because of their relative isolation, low population density and consequent radio quiet environment.

In this talk I will describe the background to the interferometry technique, the build up to the project including its scientific rationale, and its precursor telescopes. I will give special emphasis to the South African, MeerKAT project and its current status. I will also touch upon the large data volume and current handling limitations.

Enquiries: Walter Meyer
Department of Physics
University of Pretoria

e-mail: pretoria@s2a3.org.za
www: s2a3.org.za
cell: 082 7858432