



**EMEASEC 2014: 27 - 30 October 2014**  
Cape Town, South Africa

<http://incose-emea.org>

**INCOSE EMEA SECTOR SYSTEMS ENGINEERING CONFERENCE**  
"SYSTEMS ENGINEERING: EXPLORING NEW HORIZONS"

## **EDUCATIONAL TOUR TO SKA FACILITY, CARNARVON**



The Square Kilometre Array (SKA) will be the world's largest and most sensitive radio telescope, about 50 times more sensitive, and up to 10 000 faster (in terms of its survey speed) than the best radio telescopes of today. It will be powerful enough to sense radio waves from objects millions or even billions of light years away from Earth.



The SKA will focus on addressing questions that can only be answered using a radio telescope. Scientists will use it to help us understand how the Universe evolved, how stars and galaxies form and change, and what "dark matter" really is. Scientists expect that the SKA will make new discoveries that we can't even imagine now. They may even find life elsewhere in the Universe!

The collecting areas of all the receivers that make up the

SKA add up to one square kilometre - that is why the instrument is called the "Square Kilometre Array".

Many different countries are working together to build - and pay for - the SKA. At least 13 countries and close to 100 organisations are already involved, and more are joining the project.



Thousands of SKA antenna dishes will be built in South Africa (in the Karoo, not far from Carnarvon), with outstations in other parts of South Africa and in eight African partner countries, namely Botswana, Ghana, Kenya, Madagascar, Mauritius, Mozambique, Namibia and Zambia. Another part of the telescope, the low-frequency array, plus more dishes, will be built in Western Australia.



## 1. Overview

- Tour: SKA Site Visit, Carnarvon.
- Date: 30 October 2014.
- Departure: 05:30 SHARP from Lord Charles Hotel Foyer.
- Cost: R 2 250-00 (incl. VAT) per person, payable in advance upon registration.
- Meals included.
- Website: [www.ska.ac.za](http://www.ska.ac.za)
- Notes: Chartered Flight. Only 8 seats available.

## 2. The Tour at a Glance

- 05:30: Depart from Lord Charles Hotel Foyer.
- 07h15: Chartered Flight departs Cape Town International airport. Breakfast served on board.
- 08h45: Flight lands at SKA site, with fly-over of site.
- 09h00 - 11h30: Visit to the site complex, including SKA dish manufacturing facilities, Karoo Array Processor Building (KAPB) and 2.5MVA uninterrupted power supply and backup power generator for the site.
- 12h00: Light lunch.
- 12h30 - 14h30: Visit to antenna sites: KAT-7 system, MeerKAT antenna - the first of 64 to be constructed, MeerKAT antenna site being prepared, Precision Array for Probing the Epoch of Re-ionisation (PAPER) array.
- 14h30 - 16h00: Spare time - optional walk up Losberg hill to oversee the site and the Karoo landscape.
- 16h00: Flight departs site. Meal served on board.
- 17h30: Flight arrives at Cape Town International airport. Return to Hotel.

## 3. Copyright

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