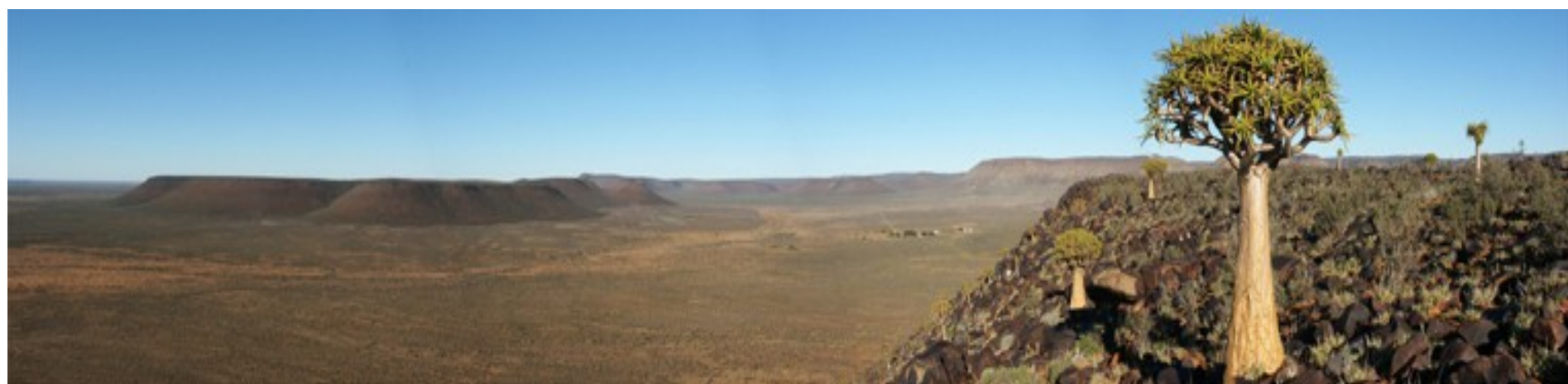


A report on KAT-7 status

Tony Foley

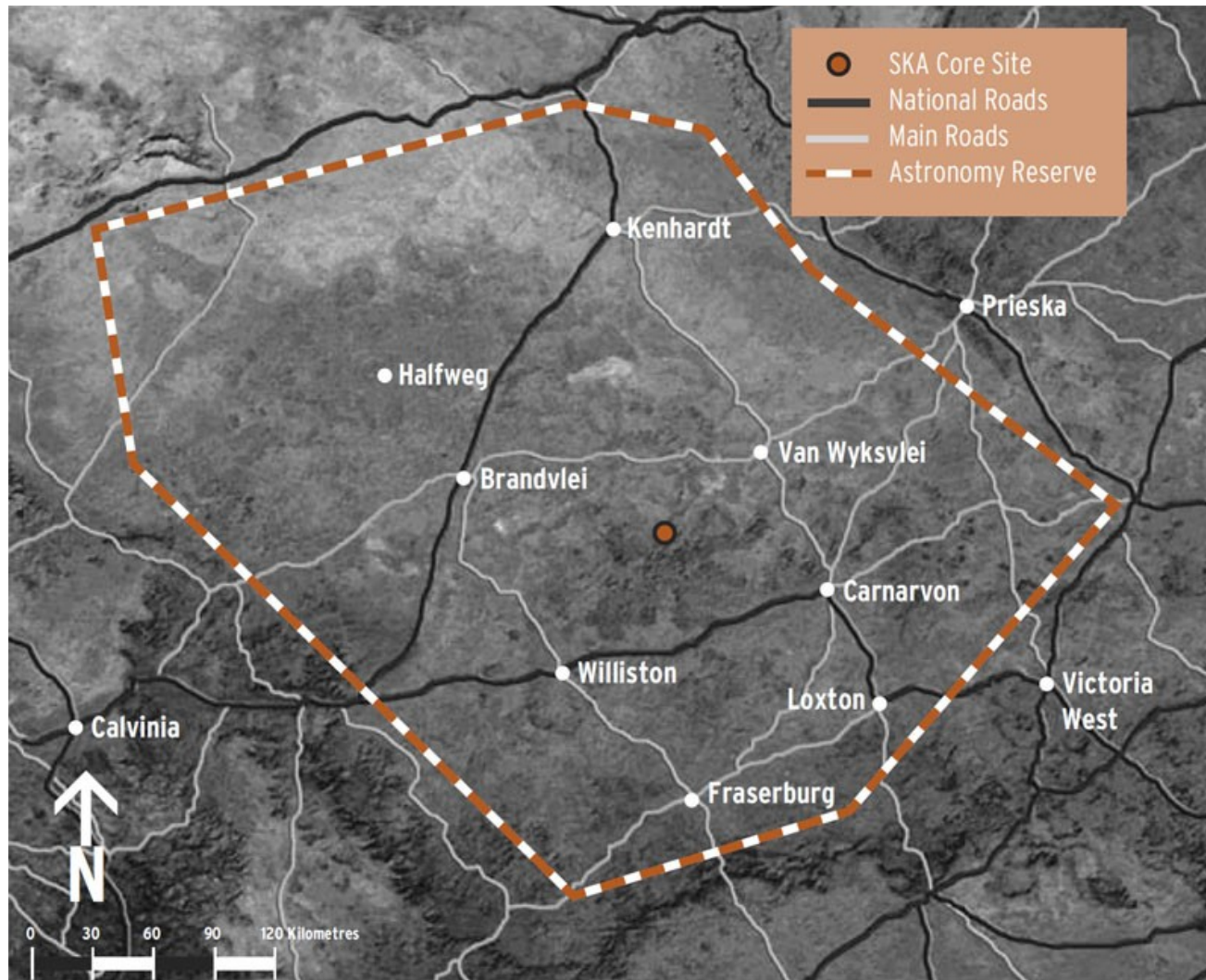
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KAT-7 overview



Reserve 21.44E 30.71S



KAT-7 Now

- **7 composite 12m dishes**
- **Altaz mount, prime focus**
- **5 operational with uncooled receivers**
- **Cryogenics have been tested**
- **Lband (1200-1950MHz)**
- **256MHz instantaneous IF**
- **RF over fibre links**
- **LOFAR containers for digital**



KAT-7 webcam snap



15/04/2011 11:55:03



KAT-7 Correlator



- **FX type**
- **Uses the SPEAD (Streaming Protocol for Exchange of Astronomical Data) for internal data streaming**
- **'KAT-7' - 16 inputs May 2011 (7 existing + 1 MeerKAT dual pol)**
- **Fringe and delay stopping now working! (cm accuracy)**
- **Continuum mode and line modes (will support at least 8192 channels)**
- **Tied array option for Pulsars, VLBI etc.**
- **Will be used for more commissioning & some science**



The Good



- **Power on site with Diesel backup**
- **10Mbps Network allows remote tests**
- **Webcams allow remote checks**
- **Convenient weekly flights for maintenance and ops**
- **Holography shows (final) dishes 1mm RMS - good enough for 2cm wavelength (15GHz) - excellent for 20cm**
- **KAT7 correlator seems to function correctly in continuum mode**
- **RFI from Losberg does not leak through the mountain**
- **Interferometry to start in earnest ASAP**

KAT-7 dish moulding



From the mountain



Flight



2011/04/13

The Bad



- **Weather (rain and lightning)**
 - Drips if heavy thunderstorm
 - Drops in ESKOM power- problems for cold receivers
- **Wind**
- **Dust + rain = Mud off the road**
- **RFI from cherry-picker**



The Ugly



Temporary cabling for FF+KAT7



What is to be done



- **UPS to bridge 40 second gap for diesel to power up**
- **Possible change of technology for cryogenic cycle for MeerKAT (Stirling to ..)**
- **Update in brake/motor assemblies**
- **Retire FF**