

SKA SWG Chairs update 17 October 2023

In attendance:

SWG: Abhirup Datta, Adriano Ingallinera, Andrei Mesinger, Barbara Cantinella, Betsey Adams, Cherry Ng, Francoise Combes, Jan Forbrich, Patrick Woudt, Mark Sargent, Stefano Camera, Tessa Vernstrom, Valentina Vacca, Jason Hessels

SKAO: Robert Braun, Anna Bonaldi, Tyler Bourke (notes)

Apologies: Cormac Reynolds, Divya Oberoi, Sebastien Muller, Natasha Hurley-Walker, Anna Nelles

Topics:

1. Construction Overview
2. Science Meetings
3. AOB

Please see the slides for details, including many construction pictures.

1. Construction Update

About half the construction contracts have been awarded, 68% of value (547Meuro)

AA0.5 component in manufacture (Note that AA0.5 is a test array on site for interferometry, using prototype dishes/antennas and (in some cases) receivers; discover system level issues and develop procedures (pointing, tracking, holography. Will be working by end 2024)

Software/computing platforms demonstrating early observing functionalities.

Majority of the remaining contracts planned to be awarded in 2023.

Mid:

70 of 72 land servitudes are in place, good progress on remaining two (the land needed for all the Mid dishes)

Good local participation in contract roles (local businesses registering for sub-contracting)

AA0.5 dishes (4) almost ready for shipping to site

Good progress on construction camps getting ready for infrastructure construction (roads, fibres, ...)

Low-frequency radio towers in place (local communications for SKA)

** Note the movie of the construction in China of the first pre-production SKA dish (put together in China at CETC-54, basic mechanical and surface tests, then taken apart for shipping (RFI environment at CETC-54 is too poor for EM testing)

Low:

AAVS3 – final test station, using Vogel layout (initially, and then modified with offsets, as explained in previous update). Deployment used as staff training, learning practical lessons.

Very high participation by local indigenous community (Wajarri Yamaji), much greater than anticipated based on past (non-SKA) projects.

Temporary Camp constructed, and water dams.

Ground mesh, fibre and power cables delivered, and being deployed – trenching for fibres underway (with good ground conditions trenching 900 m/day)

Q&A:

How does the Mid construction impact MeerKAT operations?

- Any equipment to be deployed undergoes RFI testing ahead of time to meet local standards
- Construction activities restricted to weekdays in pre-agreed upon times (same for Low site) – will be monitored

Any resource issues on site (e.g. water)?

- Yes, some bore holes not producing as much water as expected, more dug
- Power in RSA and rolling blackouts are an issue. Large effort underway to secure a more reliable power solution (incl. PV for remote dishes).

2. Upcoming Science Meetings:

- SALF – Dec 2023
- MeerKAT @ 5 – Feb 2024 (Stellenbosch)
- SKA Cosmology in Switzerland 2024 (see below)
- IAU GA – Aug 2024
- SKA Science Conference 2025 – eastern Germany, dates TBD
- SPARCS in 2024 May (Bologna)

SKA Italian meeting in December

<https://indico.ict.inaf.it/event/2535/>

Cosmology in the Alps, March 2024

- In person 80-100 participants
- Invited and contributed talks (40-50 talks, ~20 min)
- <https://Indico.skatelescope.org/event/1098/>

3. AOB?

Slight extension to the Science Data Challenge 3a by one month (closing end of October).

Renewal of SWG Chairs:

Q: (Barbara asking). What is the usual term, how is the current refresh going, etc?

A: Current refresh still in progress; nominal term is 2 years.

Q: Could we have an EoI (expression of Interest) within the group, as well as providing a list of possible names.

A: Yes, that is ok.

Valentina: Joint meeting Magnetism/EoR end of September. Discussion of possible SKA-Low surveys of interest to both groups was a highlight.

Mark S: Wide-field spectroscopic telescope (WST), the next big ESO thing after ELT. Stefano and Mark recently attended a workshop on this. Great interest in SKA in that community and synergistic programs. More information at <https://www.wstelescope.com/>

Status of ESO-SKA Workshop White Paper write-up – slow progress, but should be wrapped by end of year.

-- End of Meeting --