

### Aperture Array Design & Construction Consortium

# The Low Frequency Aperture Array

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# **SKA1-LOW**

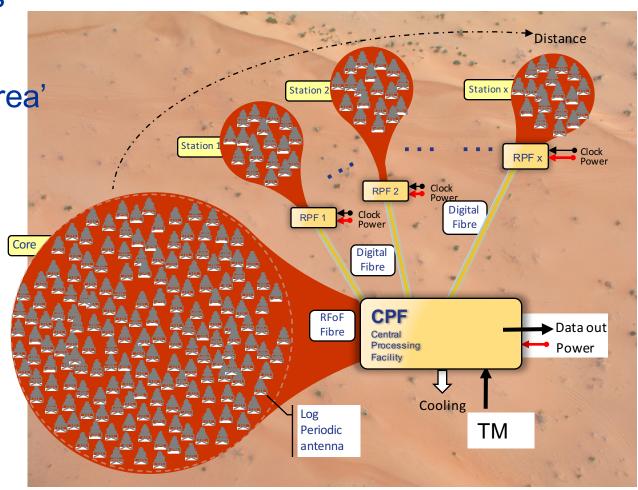
131,072 antennas

512 stations

xx% in 'Central Area'

- 95% to 55%?

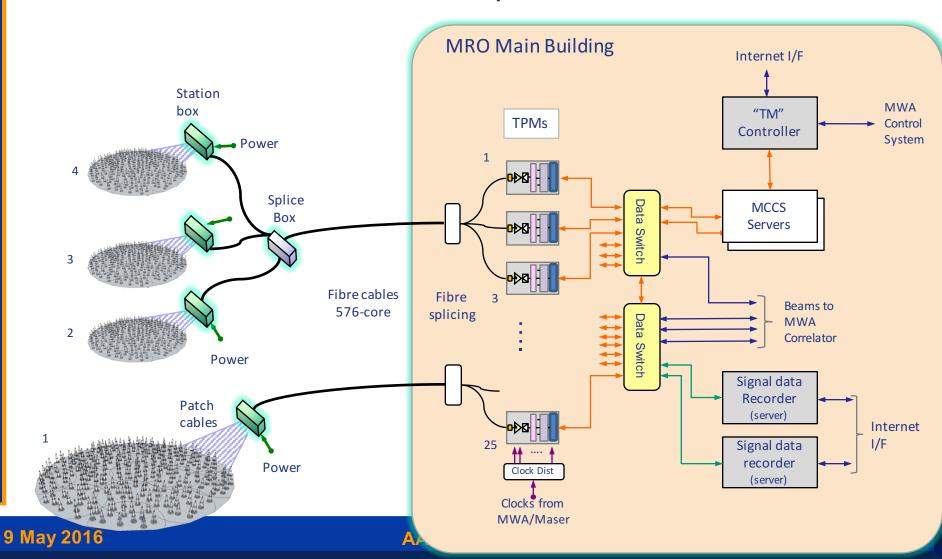
 Large central processing





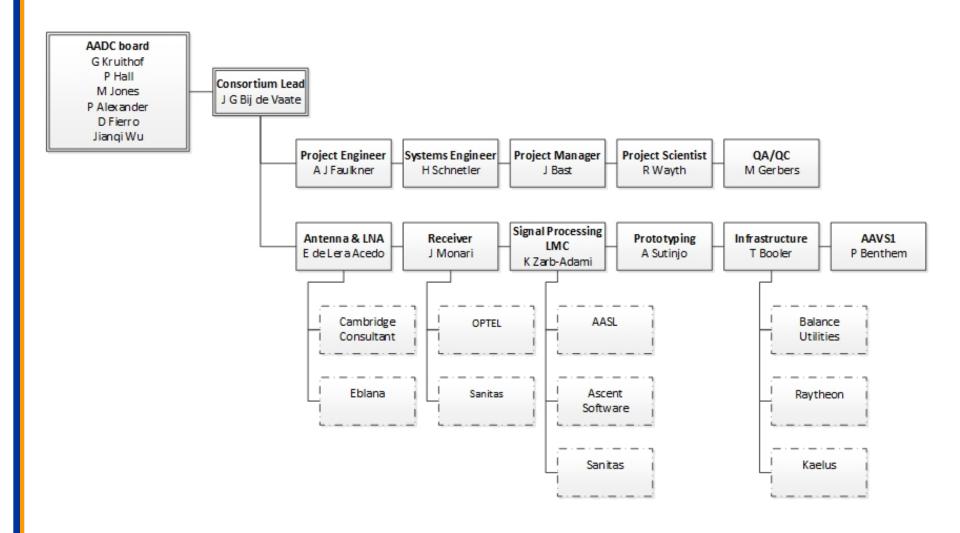
# AAVS1

400 antennas, one full station plus three small stations





# **Consortium Organisation**





# Where are we (1)

- Preliminary Design Review, PDR, Jan 2015, successful
- All stage 1 milestones completed
- AAVS1 Detailed Design Review, DDR, completed Oct 2015
- Scheduled Stage 2 milestones completed
  - Draft RAM report
  - Preliminary installation plan
  - ICDsand more..



# Where are we (2)

- Close to cost target
- Power on budget
- Schedule fine for most milestones



# Where are we (3)

### Risks:

- Calibration → good results
- Tile Processor module → working prototypes
- RFoF links → within spec → potential to go up to 50km?

All Hunky-dory?



# Where are we (3)

- Schedule under pressure
  - AAVS1 construction is delayed
  - Full CDR in April 2017 not possible
  - 80% ready by April 2017
  - AAVS1 evaluation completed Q4 2017
- Antenna modification needed

- Known impact on CDR preparation:
  - L1 requirements updates
  - ECPs
  - System PDR



# **Upcoming**

- New configuration, "for costing only"
  - Request for cost update, due 3<sup>rd</sup> June
- L1 version 7

- Invitation for an Expression of Interest on SKA1 construction
  - To the SKAO members
  - Responses by 3<sup>rd</sup> June
- Invite to submit SODP plans:
  - LOW, PAFs, WBSFP, MFAA
  - Responses by mid June

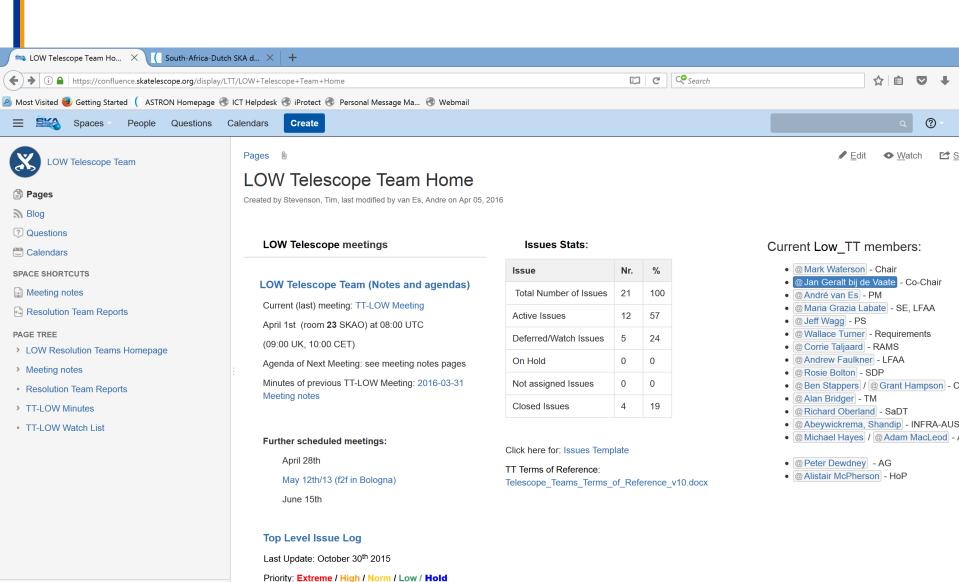


## This week

- SKA1-Low
- Progress work packages
- Low frequency pathfinders and precursors:
  - MWA, LOFAR, NenuFar, MAD/SAD, EDA
- Telescope Team, TT-LOW meeting on Thursday+Friday
- Break outs



Space tools -



Issue

**Issue Name** 

Assianed

Progress

**Priority** 

Expected

Current

Clos

Identified

Watch



# **Achievements**

			performance	
4.	T0+34 weeks	1 <sup>st</sup> July 2014	Preliminary installation plan (including demonstration plan)	€0,5M
5.	T0+38 weeks	1 <sup>st</sup> August 2014	Preliminary power design report	€1M
6.	T0+46 weeks	Mid Sept 2014	System Requirements Review and associated documents (see SEP)	€2M
7.	T0+50 weeks	End of Oct 2014	Preliminary Design Review and associated documents (see SEP)	€1M
8.	T0+68 weeks	1 <sup>st</sup> March 2015	Closure of Stage 1	€0,6M
		Total		€7,6M

→ €7M

### Table 5 List of deliverables for Stage 2.

	Nominal date	Deliverable	Earned Value
M1	15 <sup>st</sup> April 2015	Kick-off Stage 2	€1M
M2	12 <sup>th</sup> Oct 2015	AA Verification System 1 (AAVS1) Detailed Design Review	€2M
M3.1	15 <sup>th</sup> March 2016	Preliminary installation plan	€0,5M

→ **€**4.5M

€11.5M

# Or build a beautiful Telescope