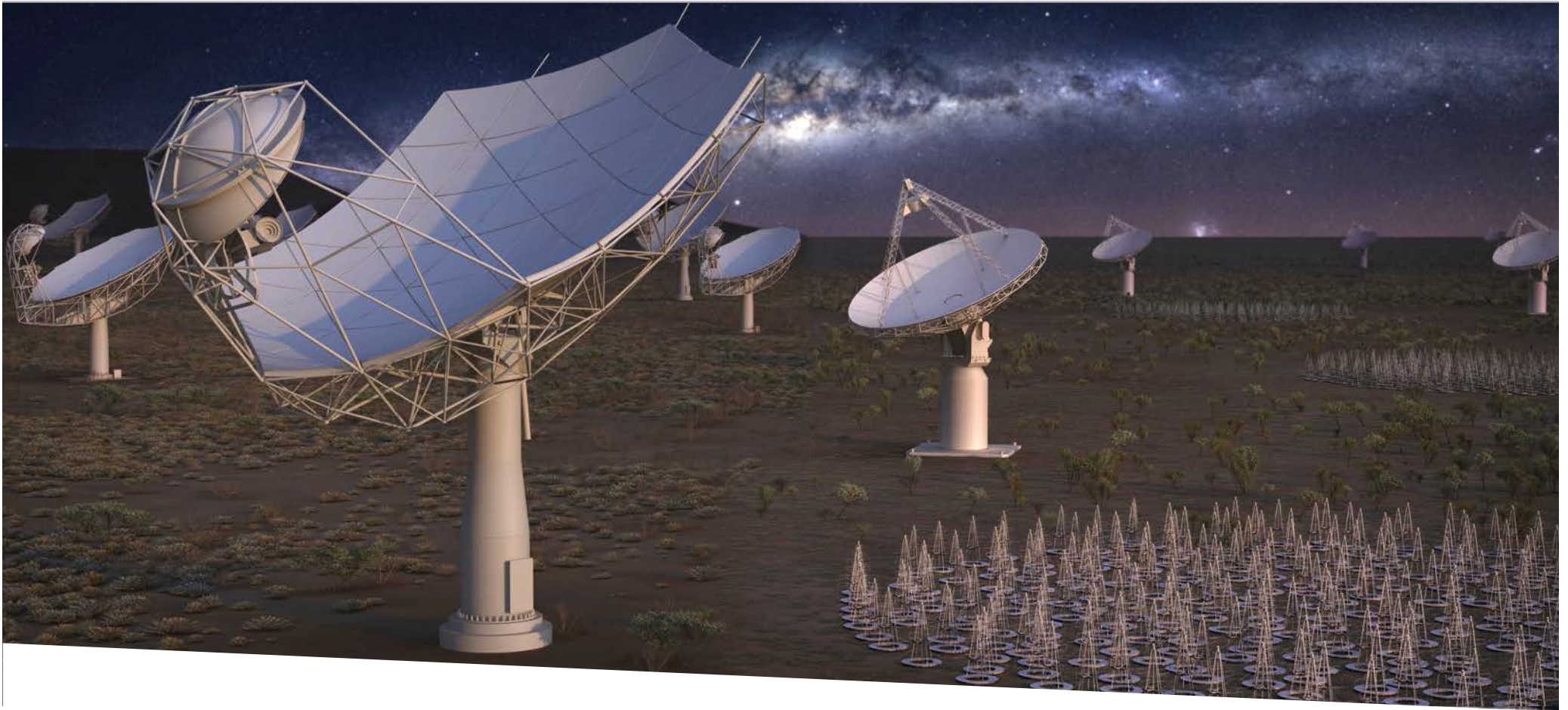


# SKA SWG Update



**SQUARE KILOMETRE ARRAY**

Exploring the Universe with the world's largest radio telescope

**Robert Braun, Science Director**

17 Mar 2020

# Science Activity Updates

- Countdown to Construction
  - Full speed ahead with the Design Baseline!
- SKA related meetings
  - SKA Science Meeting and KSP Workshop
- Round table SWG updates (All)
- AOB

# Countdown to Construction

- Definition of Construction and Observatory Plan Scope
  - SWG consultation: Jan/Feb
  - SEAC consultation: January 28
  - SKA Board Science Reps consultation: January 31
  - SKA Council Preparatory Task Force: February 5+6
    - Recommendation of Design Baseline target
  - SEAC + SKA Board Science Reps: 19 February
  - SKA Board Meeting 28 February 2020
    - Confirmation of Design Baseline target
  - Observatory Plan Review: 23+24 March
  - System CDR Close-out: 31 March
  - Two Webinars to communicate outcomes to science/engineering/ industry:
    - Will be scheduled in the coming months



# SKA Board Meeting, 28 Feb 2020

- Outcome:

“Following the recent successful System CDR, attention within SKA Organisation has turned to the preparation of the Construction Proposal and the Observatory Establishment and Delivery Plan, which covers planning for operations, business-enabling functions and future developments. After receiving advice from the Council Preparatory Task Force (CPTF) and the Science and Engineering Committee (SEAC), together with feedback from Science Working Groups (SWGs), the Board confirmed that both documents should be drafted with the aim of realising the full Phase 1 scope of the SKA by delivering the agreed Design Baseline for two transformational telescopes, SKA1-Mid in South Africa and SKA1-Low in Australia.”

# Design Baseline Scope

	SKA1-Low	SKA1-Mid
<b>Location</b>	Australia	South Africa
<b>Frequency range</b>	50 MHz – 350 MHz	350 MHz – 15.3 GHz
<b>Antenna type</b>	Log Periodic Dipole Antenna	15m Offset Gregorian Dish
<b>Quantity</b>	131,072 organised into 512 stations, each with 256 antennas	133 SKA dishes, equipped with Band 1, Band 2, and Band 5 Feeds (plus 64 MeerKAT dishes with L- and UHF-Bands)
<b>Maximum baseline (km)</b>	65	150
<b>Pulsar Search</b>	167 nodes, 500 Beams	500 nodes, 1500 Beams
<b>Compute Power (Common to both)</b>	260 PFlops	

# Next SKA Science Meeting



- SKA Science Meeting and KSP Workshop, March 2021
  - Central Cape Town
  - Up to 350 participants
  - Title: “The Precursor View of the SKA Sky”
  - Main venue secured, details being finalized
  - What is preferred format: 3 + 2 days as previously or ???
  - Stay tuned...

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