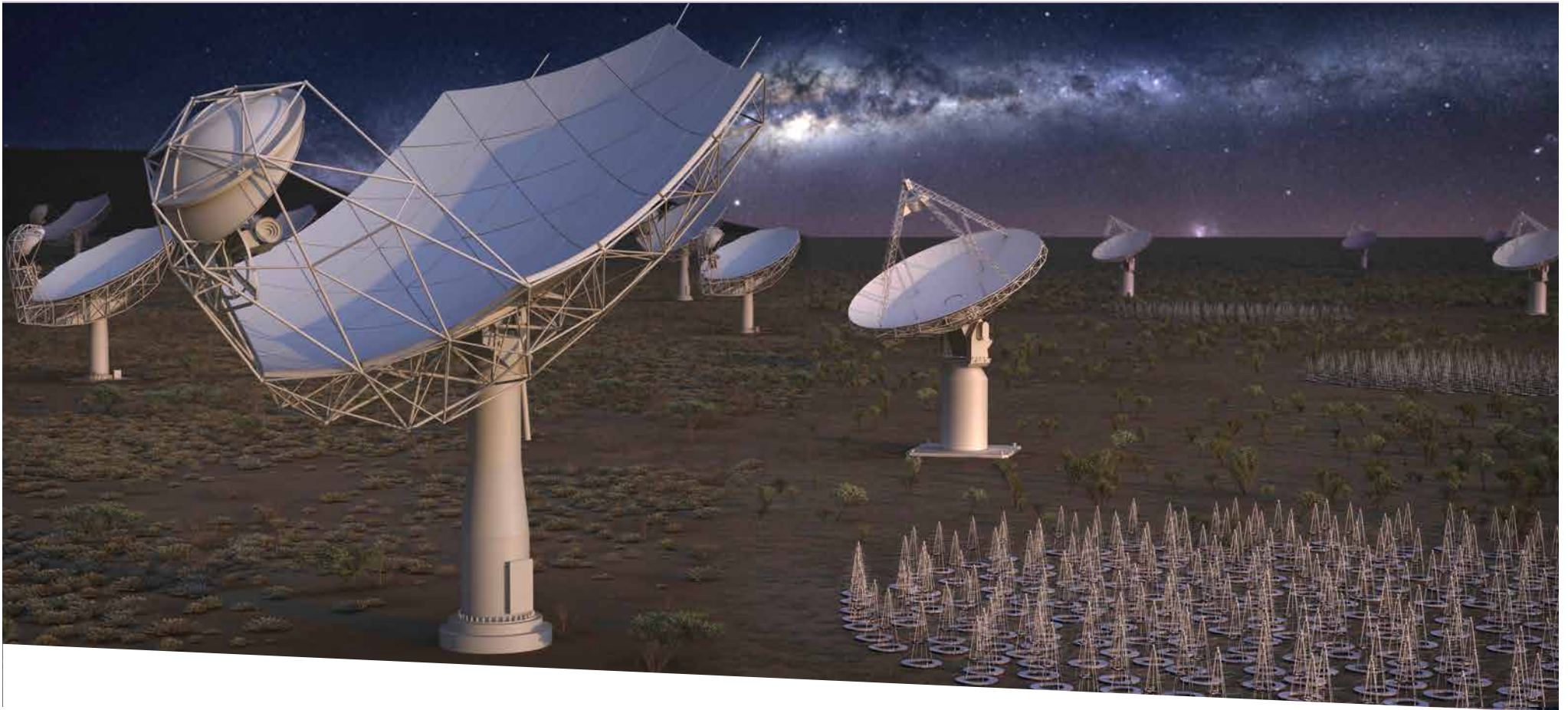


SKA SWG Update



SQUARE KILOMETRE ARRAY

Exploring the Universe with the world's largest radio telescope

Robert Braun, Science Director

9 October 2018

Agenda

- Critical Design Reviews
- SWG Science Posters
- SKA Data Challenges
- SKA Science Meetings
- Community Updates

CDR Activity – Updates

Element	RRN Submission	CDR Submission	CDR Meeting
TM	29 January 2018	28 February 2018	17-20 April 2018
SaDT & SAT	17 January 2018	28 February 2018	15-18 May 2018
INAU	19 March 2018	30 April 2018	27-29 June 2018
INSA	19 March 2018	30 April 2018	2-4 July 2018
CSP	18 May 2018 - PSS, PST, CBF-Low, CBF-Mid Sub-Element CDRs	30 June 2018	25 – 28 September 2018 !!
SDP Pre-CDR SDP CDR	9 March 2018 17 September 2018	25 April 2018 31 October 2018	20 – 22 June 2018 15 – 18 January 2019
LFAA	15 October 2018	29 October 2018	11 – 13 December 2018
AIV	29 October 2018	30 November 2018	18 – 22 February 2019
DSH Pre-CDR DSH CDR	7 September 2018 1 Apr 2019 - Band 1, LMC Sub-CDR 20 Sept 2018 - DSH Struct Sub-CDR 1 Apr 2019 - Band 2 Sub-CDR 1 Apr 2019 - Band 5 Sub-CDR 27 Aug 2019	? October 2018 22 April 2019	26 – 27 November 2018 27 May 2019 (DSH, B2) 23 Oct 2019 (B1, B5)
System			Q2 2019

Green: Successful phase

Blue: Updated from last report

Red: Post System CDR

SWG Posters

- Aim to have a poster for each SWG, similar to those put together by the Consortia (see next slide)
- First use would be AAS in January, then the April SKA meeting, ...
- Asking each SWG to produce a poster by mid-November
 - Suggest each SWG find someone from their core group to lead (can be co-chair)
- Size and template as shown on next slide (to be provided to SWGs)

Exploring the Universe with the world's largest radio telescope

The Square Kilometre Array and the Cradle of Life

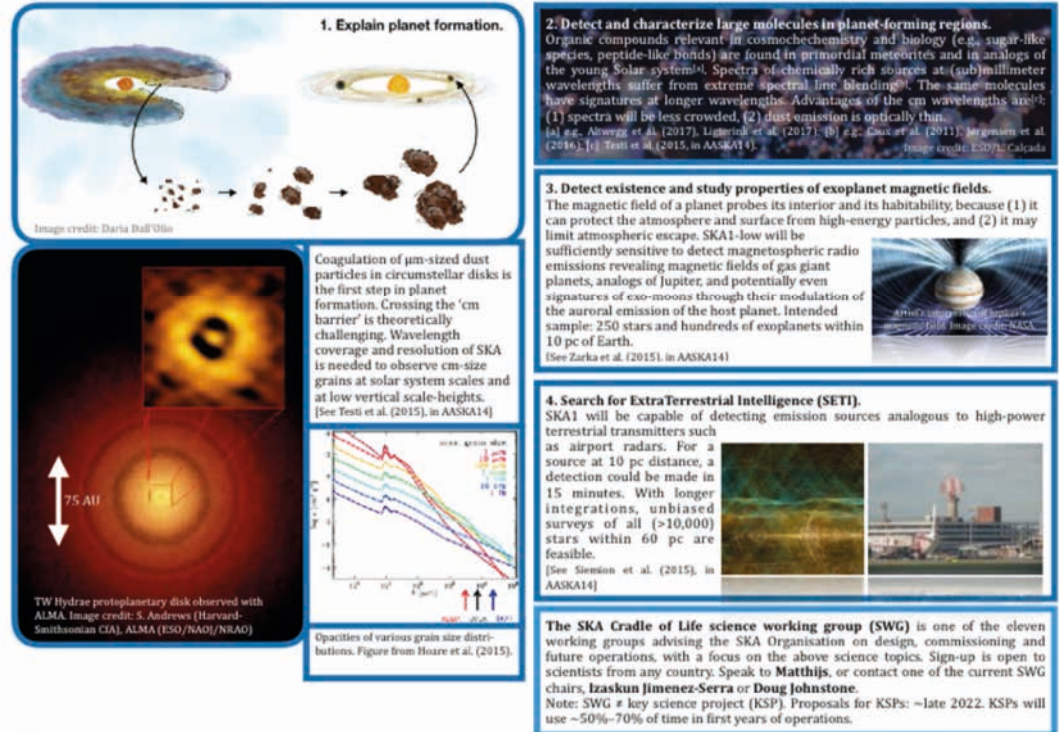


Matthijs H.D. van der Wiel¹, on behalf of the SKA 'cradle of life' science working group
¹ASTRON Netherlands Institute for Radio Astronomy, Dwingelo, The Netherlands
 wviel@astron.nl



From planet formation to the distribution of life with the SKA

(Hoare et al. (2015), SKA and the Cradle of Life, in "Advancing Astrophysics with the Square Kilometre Array (AASKA14)": 115)
 SKA books downloadable at www.skatelescope.org/books/



Templates have finally been provided

- The banner/poster will be designed on a large canvas, in portrait orientation.
- For the InDesign file, we have marked the areas that you should **not edit**, with the editable areas clear of these marks. The design file itself is already at the correct dimensions. Below are also the basic criteria for InDesign to follow:
 - Font: **Eurostile Demi**
 - Font sizes; smallest: 30pt
Largest: 146pt
- Please provide a variety of relevant imagery, with all images provided being of the highest resolution possible. If the images are of poor quality, they can't be used. Please also provide the appropriate credits for each image.
- A main blurb of text detailing the general description of the SWG
- Text on what are the big questions (no more than 4, preferably less) they are trying to answer and the main science driver
- We don't need a detailed description of the SKA on these banners (unlike the example banner from CoL)

**DO NOT
EDIT**

**General
Text/Blurb**

**Images/
Short Text**

**DO NOT
EDIT**



SKA SQUARE METRE ARRAY

Data Challenges #1

- Hope to release before end of October
- Continuum sub-band images ($\Delta\nu/\nu_c = 30\%$)
- SKA1-Mid, three frequencies: $\nu_c = 0.56, 1.4$ and 9.2 GHz
- One pointing: 8^h , 100^h and 1000^h observations
- Data info:
 - Images of 32k pixels per side for the full FoV
 - $0.60''$ FWHM resolution at 1.4 GHz
 - Size of a single frequency slice: 4GB (x9 = 32GB total)
- Advertising soon for SKAO Post-doc position for radio astronomy simulations:
<https://recruitment.skatelescope.org/category/ska-jobs/>

Science Meetings

- 2019 AAS SKA Splinter Session, Seattle, 6 – 10 January (next slides)
- 2019 URSI-AP-RASC, New Delhi, 9 – 15 March
- 2019 SKA Science Meeting and KSP Workshop
 - Registration and abstract deadline:
26 October
 - Web site:
<https://indico.skatelescope.org/event/467>
- 2020 URSI – GA, Rome, 29 Aug – 5 Sept.
 - Call for workshops/sessions



AAS Splinter Session

Preparations for 2020 US Decadal Survey underway (first science white papers due in January)

SKAO to host a splinter meeting at the January 2019 Winter AAS Meeting (Seattle), to ensure the US astronomy community (not just the radio community) is informed of

1. the current status of SKA1
2. the expected capabilities of SKA1 and vision for SKA

The splinter meeting aims to:

1. show how SKA1 enhances primary thematic science areas presented by the Committee on Astronomy and Astrophysics
2. present possible paths for US involvement in SKA in the next decade

The winter AAS meeting is the largest annual gathering of astronomers in the world, and the next winter AAS presents one of the last opportunities for any community to show how their facility will address the key thematic science areas in a public forum which may contain panelists involved the decadal review.

AAS Splinter Session

Tuesday January 8, 9.00-11.30 (TBC)

1. Keynote. The SKA vision. Jocelyn Bell Burnell (Invited, TBC)

2. Evolution of Galaxies

Kristine Spekkens (Invited, TBC)

3. Cosmology and the Cosmic Dawn/EoR

Jackie Hewitt (Invited, TBC)

4. A dynamical Universe: Gravitational Waves and Fast Radio Transients.

Ingrid Stairs

5. Cradle of Life: formation of planets and search for ET life

Doug Johnstone

6. SKA Current status. Joe McMullin (SKA Programme Director)

Science Topics extracted from list of Thematic Science Areas for Astro2020
(US Decadal review) White Papers.

Community Updates

- Upcoming SWG/FG Meetings?
 - Scintillometry Workshop: 22/26 October, Shanghai
 - HI PHISSC: 11/13 February, Perth
 - FRBs: week of 18 February, Amsterdam
 - Others?
- Updates from participating SWG/FG Chairs
 - ????

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www.skatelescope.org