

### SQUARE KILOMETRE ARRAY

Exploring the Universe with the world's largest radio telescope

**Robert Braun, Science Director** 

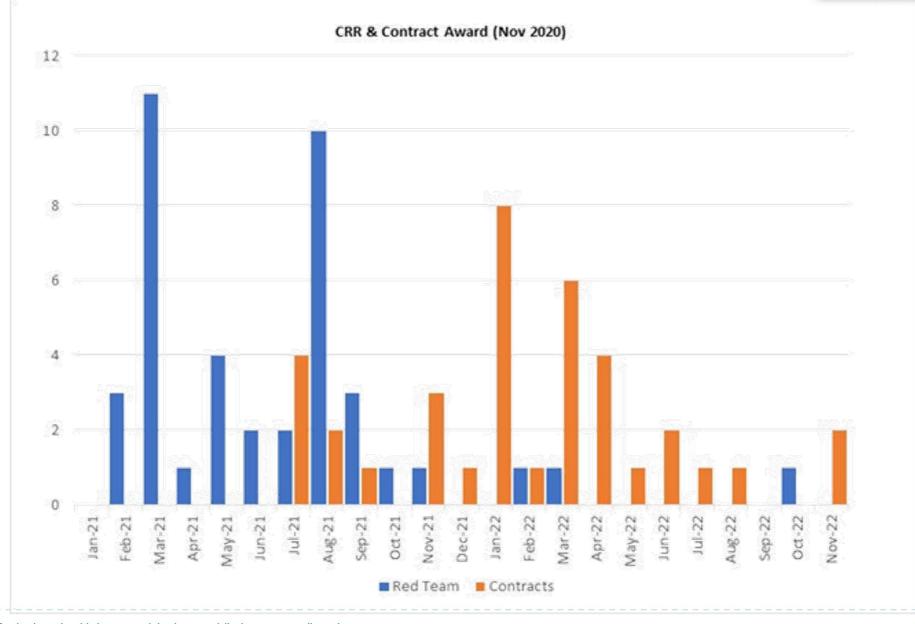
19 Jan 2021

# **Science Activity Updates**



- Coordinated SWG video repository (Cassandra Cavallaro)
- SKA Observatory
  - IGO "entry into force" as legal entity: 15 January 2021
  - SKA Observatory first Council Meeting: 3 4 February
  - Council Meeting two March/April: Approve transition of Org -> Obs
  - SKA Org staff transition to SKA Obs: early May
  - Council Meeting three June/July: Approve SKA construction
- Observatory Development Plan Science Road Map
  - Nominations for Science Advisory Group to open in February
- Gearing up for Construction Contracts
- SWG support contact updates
- Next Science Meeting (Anna)
- Current Science Data Challenge (SDC2) (Philippa)
- AOB

### **SKA Construction Contract Preparation**



# **Contract Preparation**



Touch- point	Jan '21	Feb '21	Mar <b>'</b> 21	Apr '21	May '21	Jun <b>'21</b>	Jul '21	Aug '21	Sep '21	Oct '21	Nov '21	Dec '21	Full year 2022	Full year 2023
PR	All													
CRRs (43)		Mid CSP & CBF; Low Station Mgt & Int.; Software Sole Source	Mid Infra PSC; Mid Infra 1; Mid Infra 2; Mid Infra 3; Mid Infra 4; Mid Dish PSC; Low Infra PSC; Low Infra 1; Low Infra 3; Low Infra 6	Software Comp.	Mid S- AIV; Low CSP; Low SPC; Low Infra 2; Mid Timing	Mid B2; Low Timing	Mid B1; Mid Dish Structure	Mid SPF Services; Mid SPFRx; Low Antenna Ass.; Low PaSD; Mid Infra 6	Mid Cryo; Mid & Low Clocks; Low Station Dep.; Low Infra 5; Low S-AIV	Low SPS	Mid B5		Mid Infra 5; Mid Networks; MeerKAT Integration; Mid CPF; Low Networks; Low CPF; Low PPA	Mid SPC
TEPs <u>start</u> review of tenders (56)			Mid CBF	Mid Infra PSC; Mid Dish PSC; Mid CSP; Low Infra PSC; Low Station Mgt & Int.; Software Sole Source (7?)			Software Comp. (7?)	Mid B1; Mid S-AIV; Low Timing	Mid Infra 4; Mid Dish Structure; Low Infra 1; Low Infra 6	Mid Infra 1; Mid Infra 2; Mid Infra 3; Mid B2; Low Infra 2; Low Infra 3; Low Infra 3; Low Infra 5	Mid Timing; Low CSP; Low SPC	Mid SPFRx	Mid Infra 5, Mid Infra 6; Mid B5; Mid Cryo; Mid SPF Services; MeerKAT Integration; Mid & Low Clocks; Low Station Dep.; Low Station Dep.; Low Antenna Ass.; Low PaSD; Low SPS; Low S-AIV; Low FPA	Mid Networks; Mid SPC; Mid CPF; Low Networks; Low CPF
C0s (56)	B A D D J J J A	<b>CEY:</b> en = red laurizio = k u Bruyn = lark = blue avid = gree eter = orar icque = pir ll = purple driaan = ye nassigned	brown black black en nge nk ellow				Mid Infra PSC; Mid Dish PSC; Mid CBF; Low Infra PSC; Low Station Mgt & Int.; Software Sole Source (7?)	Mid CSP	Software Comp. (7?)		Mid Infra 4; Mid S-AIV; Low Infra 1; Low Infra 2; Low Infra 6	Mid B2;	Mid Infra 1; Mid Infra 2; Mid Infra 3; Mid Infra 5; Mid Infra 6; Mid Dish Structure; Mid B1; Mid S5; Mid Cryo; Mid SPF Services; Mid SPFRx; MeerKAT Integration; Mid & Low Clocks; Mid Timing; Low Infra 3; Low Infra 5; Low Station Dep.; Low Antenna Ass.; Low PaSD; Low SPS; Low Timing; Low CSP; Low S-AIV; Low PPA; Low SPC	Low CPF; Mid Networks; Mid CPF; Low Networks; Mid SPC (2024)

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### **Contract Support**



	Progress Review	CRRs (red teams)	Tender Evaluation Panels	Contract awards
D-G	Observes per interest	Considers sole source justifications	By exception (e.g. no compliant tenders)	Approves award recommendations of FC/TSC
Mission Assurance	Chairs and provide specific inputs (HSE Plan, PA Plan, Standards, Config status)	Chair red team and provide specific inputs	Technical rep	Config
Programmes	Present status, open points and plans by general document and by contract	PMs and Design Authorities submit their contract packs for red team review. Programmes staff are also on red teams for other contracts.	PMs and Design Authorities plus additional Domain Specialists as needed	PM drafts award recommendations (with Procurement)
Operations	Inputs on Ops readiness (RAM, tools)	Red team all	Technical rep	
Strategy	Inputs on IGO dependencies	Inputs IKCAs	By exception	
Legal	Inputs on Legal readiness	Red team all		Supports
Finance	Inputs on funding, contracting financial strategies and ERP readiness	Red team where relevant (Option Cs and non-standard currencies)	By exception	Manages FC/TSC (who review Procurement's award recommendations and recommend to D-G)
Procurement	Inputs on procurement readiness incl. tools	Red team all	Panel secretary; Commercial rep	Drafts award recommendations (with PM)
HR	Inputs on direct recruitment status and readiness of partnership resourcing agreements and tools			
IT	Inputs on IT readiness	Red team where relevant	Technical rep where relevant	
Comms	Inputs on comms requirements	Internal comms on completion		Public announcements on completion
Science	Observes per interest	Red team wrt functional requirements		



### Science Working Group Support Update

SWG	Primary	Backup		
Cosmology	Anna	Philippa		
Cradle of Life	Tyler			
EoR	Jeff	Anna		
ExGal Cont	Anna Jeff	Philippa		
ExGal Line	Jeff	Tyler		
GW	Anna			
Cosmic Particles	Jeff			
HI	Jeff			
Magnetism	Tyler	Anna		
Our Galaxy	Tyler			
Pulsars	Jeff Tyler			
Solar	Jeff			
Transients	Tyler			
VLBI	Tyler			

# **SKA Science 2021**

- 15 19 March 2021
- Using the OnAir platform
- Plenary talks:
  - Abstract submission deadline 20th January
  - Plenary talks pre-recorded, with live Q&A sessions, repeated in different time zones
- Website and registration go live on 19 January (link will be distributed)
- Splinter meetings
  - Organised independently by the SWGs
  - Live talks/ discussions, time zones based on SWG geographical spread
- Poster sessions
  - We are exploring solutions for an effective virtual poster session experience

# A PRECURSOR VIEW OF THE SKA SKY

#### SKATELESCOPE.ORG/PRECURSOR-CONFERENCE

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 Square Kilometre Array

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 Square Kilometre Array

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# **SDC2 timeline**



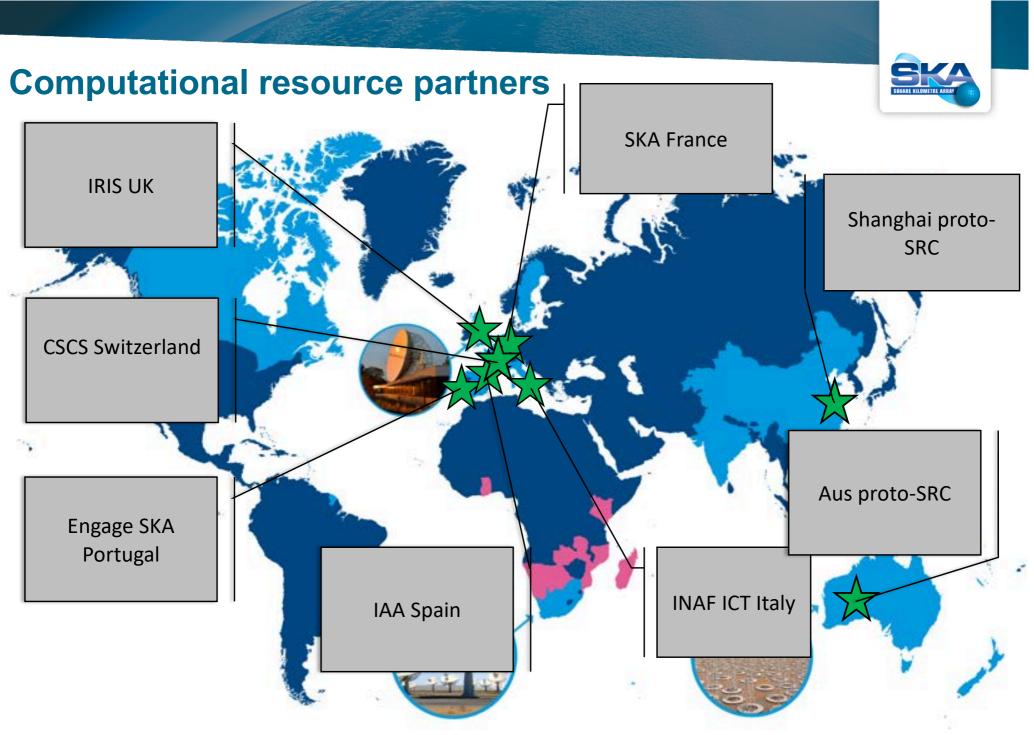
- October 31<sup>st</sup>: Close the expressions of interest call
- Mid November: Open challenge registration
   Pair teams and resources
   Test dataset transfer and scoring code
- December: Validation cube available
- January: Teams getting set up on HPC centres
- February 1<sup>st</sup>: Challenge processing begins
- July 15<sup>th</sup>: Challenge ends Winners announced
   Feedback sought from participants
   Feedback sought from facilities

## **SDC2 Participating Teams**



 40 Teams with total of 276 participants, from 80 institutes in 23 countries





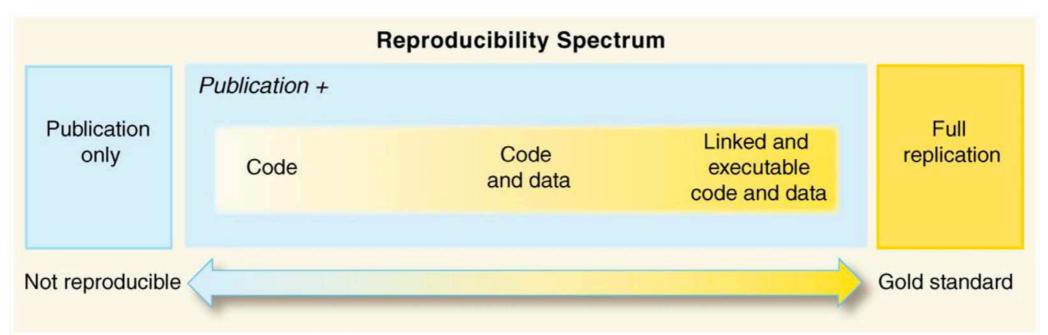
### **Reproducibility awards**

In partnership with the Software Sustainability Institute





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### AOB

- Cosmology SWG Meeting (Stefano/Laura)
- ???

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