

SWG Chairs Telecon 16-February-2021

Notes: Philippa Hartley

Participants: SWGs: Abhirup Datta, Adriano Ingallinera, Andrei Mesinger, Aris Karastergiou, Françoise Combes, George Heald, Jason Hessels, Josep Miquel Girart, Laura Wolz, Mark Sargent, Natalia Lewandowska, Nathasha Hurley-Walker, Paolo Serra, Sarah Blyth, Sebastien Muller, Stefano Camera, Valentina Vacca

Apologies:

SKAO: Anna Bonaldi, Philippa Hartley, Robert Braun, Tyler Bourke

All co-chairs are invited to put topics forward to Robert via email for now, but ultimately on the dedicated Confluence pages.

Science meeting update (Anna)

We are one month ahead of the meeting. We've been selecting speakers from abstracts. Huge interest: over 400 abstracts. Also, a poster session which will provide an additional opportunity for people to share work. We aim it to be interactive and fun, using a platform called Gather.Town.

We have a skeleton programme. Two blocks of ~ three hours with talks, each with a break in the middle. Some blocks for splinter sessions. The whole programme will be repeated again later in the day, for the benefit of other time zones.

Data challenges updates (Robert)

Taking a step back to look at where the Science Data Challenges fit into other challenges and other work.

Three distinct areas:

1. Science Data Processor Challenges: looking at calibration of the raw data. This has been taken up by the SKAO software teams in the SAFe planning intervals.
2. SKA Regional Centre Challenges: now begun serious discussion within SRCSC Working Groups to coordinate this effort. Beginning outcomes expected in the coming year.
3. Science team has so far focused on sky simulations.

Science Data Challenge update (Philippa)

Work on SDC2 consisted of creating simulated data, but also scoring, website, computational resources.

SDC2 based on neutral hydrogen, 1 TB in size. Thanks to the HI SWG for useful feedback along the way. The SDC2 cube is now released however we will update it soon with some minor modification.

In parallel to the mail SDC2 scores, we will deliver reproducibility awards to those teams that follow best-practice in their pipelines.

We have 40 teams with participants from a very diverse spread of countries.

Future challenges: the scoring service, website and computational facilities have been designed to be easily built upon to support future challenges. We also would like to collaborate more with SDP development to introduce e.g. calibration residual errors.

Given the experience with SDC1 and SDC2, a possible direction for the future would be to support SWGs in delivering their data challenges. We would like to start conversations with you.

Takuya Akahori is seconded to SKAO to prepare for a magnetism data challenge. EoR group also expressed interest in this model and could assist the simulation effort.

Andrei: we will have a splinter session on EoR data challenges at the science conference, and it would be good if someone from SKAO could attend.

Robert: that's a very good initiative,

Valentina: Takuya is planning for a magnetism data challenge on the timescale of a couple of years.

Adriano: what about simulating a generic survey, to explore commensality?

Robert: that's a good suggestion. Our SDC2 has an HI and a continuum component, so in a sense it could be used that way. Future work could add elements stepwise to build a modular-style simulation library.

Mark: what about an official SKA sensitivity calculator? that would be a good resource for the community. Also, an antenna configuration file.

Robert: in the past a prototype has been developed, but never turned into a general-purpose tool. Now the operations team are working on it.

Anna: the sensitivity calculator is being developed with high priority within the software development. We can check what's the status and possibly get an update at the next telecon.

Robert: One other source of info will be the science performance documents, which lists the numbers in fine increments.

Mark Sargent: Potentially time set aside to discuss experience and insights by the teams from the Science Data Challenges. SKAO could organise a splinter session specifically for that. Potentially HI and Continuum working groups to set up a joint session.

New members introduced: Natalia Lewandowska, visiting professor in the US. Aris Karastergiou, involved in the software development for pulsar studies.