SWG Chairs Telecon 13-November-2018
Notes by Jeff Wagg, Evan Keane

Participants: SWGs: Gianni Bernardi, Phil Edwards, Francoise Combes, Fernando Camilo, Natasha Hurley-Walker, Richard Battye, George Heald, Stijn Buitink, Ann Mao, Garrelt Mellema, Sarah Blyth, Sebastien Mueller,

Apologies: Doug Johnstone, Lourdes Verdes-Montenegro, Grazia Umana, Erik Rosolowsky, Jason Hessels, Willem van Straten, Eduard Kontar, Divya Oberoi

SKAO: Robert Braun, Jeff Wagg, Tyler Bourke, Evan Keane

Topic: Contributions sent in advance
JasonH:
- The Transients community remains interested in seeing transients incorporated into the SKA data simulations.
- I'll work with Tyler to complete a Transients poster ASAP.
- I have been in contact with Evan about the SOC for next spring's science meeting in Manchester.

Topic: Data Challenges
RB: Update on the first data challenge. Some context, as different people are using the term "data challenge" with wide range of interpretations. Our definition is summarized on the first slide. We have "SDP challenges" which is about computation at a relevant scale, ie data volume and the framework needed for the pipelines. Next is "SRC challenges" which include a role for optimization of the SDP pipelines., etc. Finally, have "Science challenges", which relate to issues faced by the end user.
RB: Ultimate goal is to have a complete end-to-end simulation of data pipeline, but that is still some years away.
RB: Next is a slide that Anna has put together. At the far right, we have the scientific results, which is where we need input from the SWGs. We foresee more realistic simulations in the future including spectral line emission, polarised continuum and transient sources. Depending on the resources we have, we would like to extend our simulations to cover the area on the left, including raw visibilities. We continue to welcome ideas from the community to make these more realistic and scientifically relevant.
RB: First data challenge is quite simple. Consists of continuum sub-band imaging with 30% fractional bandwidth at 560MHz, 1.4, and 9.2 GHz in three depths (8, 100 and 1000h). We image 32kx32k pixels out to the first primary beam sidelobe.
RB: The next couple of slides show sample images. Please play with the actual images (once the download links are posted) and provide feedback. We have included realistic models for the number counts of sources between 150 MHz and 22 GHz, including star-forming galaxies and AGN. The well-resolved AGN are drawn from the DRAGNS atlas. We have not included calibration errors but will include these in the future, but we see an additional 20% noise floor (above thermal) in the 1000h images due to residual sidelobes.
RB: For the challenge itself, we will compare the source finding and characterisation results of the community submissions with our input catalogue.

RB: We have advertised our first SKA postdoc who will continue this work so please encourage people to apply who may be interested and with the right expertise.

https://jobregister.aas.org/ad/5cc4706d
https://recruitment.skatelescope.org/ska-postdoctoral-position-radio-astronomy-simulations/

RB: Finally, the next two slides summarise the criteria for the challenge. The intention is to announce the winner at the April science meeting. Is the time interval for responses too short? Is the challenge, as defined, appropriate?
FrancoiseC: I was wondering about the sidelobes and whether you have tried identifying false sources in the images that are introduced by residual sidelobe errors.
RB: We include the dirty beam as a deliverable with the challenge so that people can see the residual sidelobes that are expected around the brightest sources. In the future, we will include calibration errors that would introduce additional image artifacts.
NHW: In answer to your question about whether the timescales are too short, I can poll the continuum working group and get back to you within a week as to whether people would be willing to do this by April.
RB: Excellent, that would be greatly appreciated.
RB: The next slide shows the timeline to remind you how the data challenges fit into the larger project timeline.

Topic: SWG Posters
TB: Just to remind you, the templates for the posters were sent out a couple of weeks ago. The goal is to show these at major meetings, including the AAS in January. I believe that everyone has responded to this, and some early drafts have come in. The sooner you can get us the drafts, the better. Here are a couple of complete drafts from HI group and spectral line.
TB: I thank you all for your efforts

Topic: AAS Splinter Session
TB: We are organising a splinter session at the AAS to make sure that we are still in the vision of the US community.
TB: The programme is shown on the next slide, and thanks to all of you who have stepped up to give talks
GM: Regarding JamesA as the EoR speaker, he would benefit from some SWG support to ensure that his information is up-to-date.
RichardB: he is also listed as speaking about cosmology, but has not been associated with this SWG
RB: Vital that our EoR and Cosmology SWG Chairs provide up-to-date information to JamesA regarding recent activities in these working groups, so that his presentation is representative of that work.

Topic: Science meeting and KSP workshop
RB: We have had huge interest in the meeting, in fact, there are too many people for the original HQ venue which holds 160. Our backup venue shown in this slide can hold 232, and so we will use this venue for the plenary science sessions from Monday to Wednesday, and

then have breakout workshops back at the HQ on Thursday and Friday. We have around 50 talk slots with 150 abstract submissions for talk slots.
EK: The SOC are reviewing abstracts and we should have the selection by the end of the year
SB: I had assumed that chairs would be expected to speak, is that the case?
RB: We are planning that the workshop sessions will be organised by the SWG as they see fit and that the final few hours at the end of the week could be used for the chairs to summarize the discussion from their breakouts
RB: Any questions?
RichardB: for those on the waiting list, when will they find out?
RB: With respect to some countries, they have been running their own process to make sure that they are adequately represented. I have asked them to respond by the middle of this week. Hopefully we can let you know this week.
AnnM: Is there a possibility at the meeting venue that you have a breakout room with livestreaming to increase the total meeting capacity to 300+?
RB: A good suggestion. We will investigate technical feasibility ASAP.
EK: Would people be happy with that?
All: Some concerns expressed, but generally favourable reaction to this option.

RB: Ok, thanks all.