

SWG Chairs Telecon 15-June-2021

Participants (23 incl SKAO): SWGs: Abhirup D., Andrei M., Aris K., Barbara C. Mark S., Divya O., Eduard K., Fernando C., George H., Jan F., Jason H., Josep Miguel G., Laura W., Laurent L., Natasha H.-W., Patrick W., Phil E., Stijn B., Valentina V.,

Apologies: Paolo S., Françoise C., Philippa H., Stefano C.

SKAO: Robert B., Tyler B., Anna B., Jeff W.

Topic: SKAO member countries and SEAC

RB: - starting with membership, there are now 6 full members of the IGO

- During a visit to South Africa, Macron announces that France will become an SKAO member
- China completed ratification of the treaty on June 3
- EPFL signed a cooperation agreement that is the first step in their membership
- We are still waiting on a few others such as India and Canada, but things are moving forward
- The council will meet later this month and the hope is that they will approve the start of construction. Look out for announcement
- We have also recently updated the membership of the SEAC who are the highest level advisory body which makes recommendations to the DG and Council
- The first meeting of the updated SEAC took place about a week ago, and about 50% of the members are new
- The only difference between members and observers is where they currently stand with respect to their country membership status within the IGO
- SEAC members do not represent country interest, but are there for their expertise and make sure that the observatory functions effectively
- A good first meeting where they were asked to advise council whether we are ready to go ahead with a start to construction. We have now received their report and are responding to it

JH: - how is SEAC membership chosen and how do they interact with SWGs?

RB: - each country nominated a list of three or four people with a range of expertise, and then an attempt was made to achieve a good balance while seeking to supplement areas (using "at large" appointments) which might benefit from additional expertise.

Appointments are then confirmed by Council. Regarding their relation to the Science Working Groups, the SEAC provides guidance to the DG and Council directly and on the science side the SWGs provide advice to the Science Director

Topic: Report on Intensity Mapping foregrounds Challenge

Laura W: - We started a foreground removal challenge about a year ago and we are just wrapping up writing a paper

- Tried to make realistic SKA/MeerKAT simulations for the challenge with realistic scanning strategy with different beams for SKA and MeerKAT telescopes (complex beams)
- Implemented two foreground models (examples are shown in the slides) with noise from the scanning included

- Completely blind foreground removal challenge, with those who created sims not allowed to participate
- 4 participants including multiple methods. One important aspect is how many foreground components are removed. A lot of different datasets and approaches with significant variation in outcomes.
- Looking at the power spectrum and line of sight power spectrum you can see the different depths that are probed with SKA and MeerKAT. Interesting artefact peak due to beam oscillating in width that we do not see if we go for a simple foreground model – the more complex the beam model, the more difficult the foreground cleaning becomes
- Tested a lot of things and conclusions are summarized in this slide. You need to know your beam model very well.

JH – you do not tell people what the beam is in detail? Do you foresee techniques to mitigate the problems with beam uncertainties?

LW – yes, we provided only a truncated beam model. Some people are working on this and there so much more to add in. This will be vital to prepare us for the data and we are already working with MeerKAT data.

Topic: Report on HI/Exgal Continuum joint workshop

Barbara C:

- We had a joint workshop at the end of May with 4 talks, 2 science, 2 technical
- At peak we had 62 participants and we had an enthusiastic response for future joint meetings covering a broad range of topics. In the future we should focus on commensality in terms of science and instrument setups

Mark S.: - We may have had up to 90 participants

- Had too little time in March during science meeting so we took talks from those that were missed. Next time we will launch a call for expressions of interest. It was very popular

Topic: Discussion on diversity within SWGs

Valentina V:

- -SKAO has put attention on getting balance amongst chairs for balance in gender and country
- There has not been the same level of attention in general membership of SWGs
- Lately we organised voluntary plenary talks and of the talks offered we had very few women. Does this reflect underrepresentation of women in Magnetism WG
- Discussed with Tyler who collected some stats for us which are shown in this slide: approximately 30% female in current and past co-chairs
- We looked at this for some working groups where we could analyse core versus associate membership stats (shown in slide)
- We should also think about diversity in culture and career stage

George: - just one piece I would like to add which is that we realised that the gender balance of parent community is not balanced and shows strong trends in terms of seniority and country. We have been passive and should be more active and not implicitly biased

Fernando: Have you considered racial representation?

Valentina: - No, just gender

Jason: - we agree that we need to be proactive in this and have been contacted by STFC who asked how we include new working group members. It would help if there was a more centrally localized definition for how one can become a member.

Valentina: - In our group we do not include PhD students and this is different than other groups

Robert B: - It sounds like it is time for us to look carefully at the Science Working Group terms of reference where it should be made clear who we are trying to attract. We have been keen to be open to anyone who wants to join as long as they are publishing researchers irrespective of their career stage. We should find a way to make it more appealing to engage and eliminate any barriers

Abhirup: - One thing we should think about is the entry criteria. For example in EoR we are not taking PhD students and ask for a short paragraph from perspective new members

Andrei: - it would be nice to have a standardized approach. We inherited the advice that the groups should be restricted to postdocs or senior researchers

Jeff: - There may have been an earlier version of the SWG terms of reference which restricted the groups to postdocs or senior researchers, as this also came up in the Pulsar SWG meeting yesterday

RB: - Thank you all very much for this update. I will look at the terms of reference and make sure these are up to date and see how we can more broadly advertise that we have a wide open door to membership and encourage all forms of diversity

George: - We focused on gender because we cannot account for other demographic info such as race

Robert: - I'm uncomfortable asking demographic information of a personal nature

Laura: - I agree with George that it would be good to have this information. We could think of a cultural survey that is completely anonymous. We could ask how people are feeling within these groups

Robert: - We have to be careful not to put people off by invading their privacy

Fernando: - I feel that if it is appropriately structured one can ask these questions. If we introduce it carefully and explain the reasons and people are not required to answer

Mark: - regarding inclusion of PhD students, we get fairly few requests from early career researchers to join, and what we realised during UK SKA town hall, there is a gap in knowledge for how they can get involved and we should reach out more proactively.

Maybe SKAO could highlight some of the early career researchers

Andrei: - just to build on this, there is a groundswell of support in the chat for Jan's idea for a membership request form online to ensure consistent approach to membership across the groups

Jan (via Zoom Chat): -Perhaps there could be a general (but short) membership request form, to ensure a reasonably consistent approach across groups? Even if this is then forwarded to the SWGs. Additional information could also be collected there.

Lots of support for Jan's suggestion and it will be followed-up.

Topic: AOB

Josep – tomorrow we have a webinar in the CoL group about exoplanets observations with LOFAR at 3pm UTC