

Summary of the Discussion Session
Workshop on “Science with the SKA”
IISER MOHALI
19 March 2014

A discussion session was held at IISER Mohali as a part of the one-day workshop on “Science with the SKA”. The session was attended by 47 participants. The main purpose of the discussion session was to find ways of preparing the Indian astronomy community for doing science with the SKA as and when it comes up. This session was preceded by a set of talks on different aspects of science with the SKA by relevant experts from the Indian astronomy community, which set the stage for the discussions. A summary of points discussed and decisions taken during the session are given here:

- **Formation of Science Working Groups (SWGs):** After some discussion, it was decided that the most efficient way to move forward would be to form science working groups (SWGs) on topics related to SKA. The topics would be chosen in a way that (i) they should have considerable overlap (but not necessarily one-to-one correspondence) with the international SWGs for the SKA and (ii) they should reflect the strengths and capabilities of the science community in India. In other words, the topics would closely resemble the international working groups, but there could be differences to account for interests prevailing within the Indian community. It was also noted that the international SWGs may change after the science case is re-assessed during a SKA Science meeting in June 2014.
- **Co-ordinators of the SWGs:** The activities of each SWG could be co-ordinated by a set of co-ordinators. It was decided that each group could have at least two co-ordinators so that the work load could be divided appropriately. These co-ordinators could actively contact people within the community and try to expand the participation.
- **SWGs and co-ordinators:** After a lot of discussion, the following groups were formed and the co-ordinators were identified:

Science Working Groups	Co-ordinators
Epoch of Reionization and Cosmology	Somnath Bharadwaj, Jasjeet Singh Bagla, Tirthankar Roy Choudhury
Radio Transients	Poonam Chandra, L. Resmi
Pulsars	B.C. Joshi, Sushan Konar
Cosmic Magnetism and Turbulence	T.R. Seshadri, Prasun Dutta
Continuum Surveys	Dharam Vir Lal, Preeti Kharb
HI and Galaxy Evolution	Jayaram Chengalur, Nissim Kanekar
Solar and Heliospheric Physics	Divya Oberoi

It was noted that the SWG on Solar and Heliospheric Physics does not have a counterpart in the list of international SWGs. Hence it was decided that the group co-ordinator, Divya Oberoi, would have discussions with scientists working in similar areas within India and find the most appropriate way to move forward.

- **Short-term activities of the SWGs:** It was discussed and decided that the SWGs could have some immediate goals (along with a number of long-term activities listed in the next point). The near-term activities which were discussed were:
 - (i) The international SWGs are in the process of updating the science case. Some of the documents regarding this assessment are already available. It was proposed to circulate these documents within the group members so that they can take a look.

(ii) There would be an international meeting in June 2014 to assess the SKA science case. It was proposed to have a meeting of the members of the Indian SWGs soon afterwards to take stock of the situation. The meeting could be some time around September-October 2014. It is not necessary that all the members attend the meeting, one or two members from each group would be sufficient.

(iii) Each group should produce a document outlining the science activities to be taken up by them. The document should identify the strengths and capabilities of the group and is expected to specify the approximate timelines for different scientific projects to be targetted. The deadline for preparing this document would be decided later.

- **Long-term activities of the SWGs:** Discussions were held to plan the long-term activities.
 - (i) The Indian SWGs should try to interact with the corresponding international groups. It was advised that one or more members of the Indian groups should become members of the international SWGs.
 - (ii) Each working group should hold regular meetings/tele-conferences etc. The specifics of these interactions should be left to the individual groups.
 - (iii) The groups should hold specialised training schools for Ph.D. Students (both present and future) and any other interested members.
 - (iv) There should also be schools aimed at university students (B.Sc/M.Sc.) and teachers to make them aware of SKA and its capabilities.
- **Overseeing of the SWGs:** It was decided that there should be a group/person who can oversee all the SWGs and facilitates any possible co-ordination among them. Tirthankar Roy Choudhury was identified for this task.
- **Website:** It was proposed to have a website for the Indian SWGs. The site could be in the form of wikipages. It could contain the talks presented in the one-day meeting as well as email-lists for all the SWGs. Arunima Banerjee and Yogesh Wadadekar would look into this matter. The website, at least for the time being, could be hosted in NCRA-TIFR.
- **SKA-India consortium:** It was proposed to make this association of SWGs and members more formal, and the idea of a SKA-India Consortium was floated by Yashwant Gupta. This would be a formal body which can deal with funding, interfacing with government bodies and other issues. Any Institution or Individual can become a member of this Consortium. The members would be bound by a Memorandum of Understanding (MoU). The idea was generally welcomed by all the members. It was decided that a draft MoU would be circulated among members of different Institutions. Once feedback from them are received, one can finalise the draft and get it approved by all interested parties.

List of participants in the discussion session

Sl	Name	Affiliation
1	Yashwant Gupta	NCRA-TIFR
2	Sachindra Naik	PRL
3	Tirthankar Roy Choudhury	NCRA-TIFR
4	Jayaram Chengalur	NCRA-TIFR
5	Niruj Ramanujam	NCRA-TIFR
6	Varun Bhalerao	IUCAA
7	Sudip Bhattacharyya	TIFR
8	Subhabrata Majumdar	TIFR
9	Poonam Chandra	NCRA-TIFR
10	Sushan Konar	NCRA-TIFR
11	Preeti Kharb	IIA
12	Dharam Vir Lal	NCRA-TIFR
13	Prajval Shastri	IIA
14	Kanan K. Datta	NCRA-TIFR
15	Prasun Dutta	IISER Bhopal
16	Anjan A. Sen	Jamia Milia Islamia
17	Ishwara Chandra	NCRA-TIFR
18	Ashutosh Tripathi	IISER, Mohali
19	Raghunath Ghara	NCRA-TIFR
20	T. R. Seshadri	Univ Delhi
21	L. Resmi	IIST
22	Nisha Gupta	IISER, Mohali
23	Ashok Singal	PRL
24	Nissim Kanekar	NCRA-TIFR
25	Somnath Bharadwaj	IIT, Kharagpur
26	Jasjeet S. Bagla	IISER, Mohali
27	Avinash Deshpande	RRI
28	Tapomoy Guha Sarkar	BITS, Pilani
29	Narendra Nath Patra	NCRA-TIFR
30	Samir Choudhuri	IIT, Kharagpur
31	Md. Wali Hossain	Jamia Milia Islamia
32	Sumit Kumar	Jamia Milia Islamia
33	Subhashis Roy	NCRA-TIFR
34	Divya Oberoi	NCRA-TIFR
35	Shashikiran Ganesh	PRL
36	Yogesh Wadadekar	NCRA-TIFR
37	H.K. Jassal	IISER, Mohali
38	Prabhakar Tiwari	IIT, Kanpur
39	Siddharth S. Malu	IIT, Indore
40	Bharat K. Gehlot	IISER, Mohali
41	Soniya Sharma	IISER, Mohali
42	Arunima Banerjee	NCRA-TIFR
43	Sharvari Nadkarni-Ghosh	IIT, Kanpur
44	B. C. Joshi	NCRA-TIFR
45	Archana Sangwan	IISER, Mohali
46	Tarun Roshan	IISER, Mohali
47	Karishma Bansal	IISER, Mohali