

The Directors of SKA Organisation held a meeting at Curtin University in Perth, Western Australia on the 29th and 30th of March 2017 for the 23rd meeting of the SKA Board of Directors.



Notes from the Chair of the SKA Board, 23rd Meeting of the Board of Directors of SKA Organisation

Introduction

Professor Giovanni Bignami (Chair of the SKA Board) welcomed directors and invited guests from Centre National de la Recherche Scientifique (France), CSIRO Astronomy and Space Science (Australia), Department of Industry, Innovation and Science (Australia), Federal Ministry of Economic Affairs, Education and Research (Switzerland), Korea Astronomy and Space Science Institute, Max-Planck-Gesellschaft (Germany), Ministry of Economy and Competitiveness (Spain), National Astronomy Observatory of Japan, National Remote Sensing Center of China, SKA Office, SKA Science and Engineering Committee and Science and Technology Facilities Council (UK).

The Board approved the appointments of Dr Rob Adam as Alternate Voting Director (ZA) in place of Dr Phil Mjwara, Mr Simon Rae as Alternate Voting Director (NZ) in place of Dr Peter Crabtree, and Dr Michiel van Haarlem as Alternate Science Director (NL) in place of Dr Marco de Vos.

Director-General's Report

Professor Philip Diamond (Director-General, SKA Organisation) provided an update on the status of the project, current major issues and engagement with potential new member countries since the last Board meeting. Dr Sean Dougherty (National Research Council, Canada), Prof. Jacqueline van Gorkom (Columbia University, USA) and Dr Gary Sanders (Thirty Meter Telescope project, USA) have recently stepped down from the Science and Engineering Advisory Committee and are thanked for their contributions to the SKA project. Prof. Diamond presented the nominations of Dr Kristine Spekkens (Royal Military College of Canada), Dr Tracy Clarke (Naval Research Laboratory, USA) and Prof. Greg Taylor (University of New Mexico, USA) for membership of the SEAC; the Board approved the appointment of these new members.

[Finance Committee](#)

Mr David Luchetti (Deputy Chair of SKA Finance Committee) presented the Finance Committee's Report of its seventh meeting, held on 28 February 2017. The SKA Board noted the Report and approved the adoption of Financial Reporting Standard (FRS) 102 in accordance with modern accounting practices.

[Engineering Report](#)

Mr Alistair McPherson (Head of Project and Deputy Director-General, SKA Organisation) presented the Engineering Report on design and development in the pre-construction phase of the SKA Project. The Board noted the Engineering Report and acknowledged the progress that has been achieved over the past few months.

[Science and Engineering Advisory Committee \(SEAC\)](#)

Prof Andrea Ferrara (University of Pisa), Chair of the SEAC, presented the SEAC's report on its face-to-face meeting held on 16-17 March 2017, which included the SEAC recommendations on the Cost Control Project and an update on the four charges currently being considered by the SEAC. This Committee has provided advice on two of the charges (SKA1-Low configuration and SKA1-Mid timing solution); the SKA Office is currently evaluating this advice. Mr Alistair McPherson presented the SKA Office's response to the SEAC report. The SKA Board noted the SEAC report and the SKA Office's response to the report.

[Cost Update](#)

Mr Alistair McPherson provided his regular Board update on project cost. The Board welcomed a revised construction cost estimate of €829M and the revised estimate of operations cost of €93M/yr (plus €20m/yr development costs), both of which have reduced significantly since the last Board meeting.

Cost Control Project

The Board considered the progress of a highly successful cost control exercise. The Board identified a range of potential cost reduction measures and, based on these, resolved to bring in a baseline design for SKA Phase 1 that would represent a transformational capability in radio-astronomy. The agreed cost cap for construction is €674M. Intensive work will be undertaken over the next three months to further develop a select number of identified options agreed at the Board meeting to fully comprehend the impact of each option on science and the project schedule, and to aim for a final decision to be made by the July Board meeting.

This work has been conducted by the SKA Office and the international design consortia with guidance and advice from the Cost Update Sub-Committee (the SKA Board Science Directors) and the SKA Science and Engineering Advisory Committee.

The cost reduction measures draw on lessons learned from technological developments from the SKA precursor and pathfinder facilities. They take full advantage of the scalable nature of interferometers, enabling most science capabilities not immediately available when the telescope comes online to be re-instated as additional funding becomes available.

A related and parallel exercise to bring down the proposed costs of operating the telescope is in progress.

Two meetings are scheduled in the coming weeks to brief the SKA community on the implications of the Board discussion and provide an opportunity for community input: firstly an SKA Town Hall Meeting in May with the SKA science community, to be held on 18-19 May near the SKA HQ in the UK, whose objective will be to undertake a broader scientific review and discussion of the cost-reduction measures; then the SKA Engineering Meeting, to be held on 12-16 June in Rotterdam, the Netherlands, whose role will be to ensure proposed technical adjustments are well understood and taken on board by the relevant consortia ahead of their Critical Design Reviews.

The SKA Office, assisted in its work by the consortia and specialist scientific and technical groups, will carry out further investigations in order to deliver the required cost savings and fully comprehend the impact on science and the project schedule. Advice, including on timeframes, related to the work by consortia towards critical design reviews, will be developed over coming weeks and provided before the end of April.

Policy

Dr Simon Berry (Director of Corporate Strategy, SKA Organisation) presented a report on the Strategy and Business Development Committee (StratCom) face-to-face meeting, held in The Hague, Netherlands on 27-28 February 2017. The Board noted the report and discussed the latest version of the coordinated policy-engineering timeline and its linkages with the implementation of the SKA Observatory IGO.

Dr Berry also presented an update on the transition planning towards the SKA Observatory IGO and emerging issues around several key principles which will underpin several aspects of the transition plan, i.e. decision-making, scheduling, personnel issues and organisational design. The Board broadly endorsed continuation of the transition activity based on the current planning assumptions and, furthermore, provided advice to the SKA Office on several areas, including the development of a clear understanding of the legal environment for the transition. The proposed transition plan will be presented to the Board at the Board meeting in July 2017.

A meeting of legal experts from member countries took place at SKA HQ on 16-17 February 2017 to consider key Convention documents for consistency, legal correctness and adherence to international law. The Board noted the update on the negotiations to establish the SKA Observatory IGO.

[Invited Guests](#)

The guests from France, Germany, Japan, Korea, Spain and Switzerland provided brief reports on activities and engagement within their science communities and their governments. The Board welcomed these reports.

[Site Reports](#)

The SKA Board noted site reports from Australia and South Africa. Dr Sarah Pearce reported that Australian infrastructure development and site establishment activities are progressing well. Early Science continues with ASKAP-12. In total, 30 Mk II Phased Array Feeds are installed on ASKAP and astronomers can choose from 18 antennas to form an ASKAP-12 array. Dr Robert Adam reported that MeerKAT Array Release 3 will be science commissioned by 31st March 2018 and the review of Large Survey Projects is being finalised. He added that the SKA Precursor HERA is now fully funded.

[Items for Noting](#)

The Board noted the report from the SKA Science Director and various updates on planning for operations, equality & diversity within SKA Organisation, project and corporate risks, HQ and

Site Hosting Agreements, construction of the new SKA HQ, the report of the SKA Director for Communications and the Board Forward Workplan.

Future SKA Board Meetings

The Board discussed future SKA Board meeting dates and the following was agreed:

- Mid-Term Board meeting: 23 May 2017 (Video-conference)
- SKA-BD-24 meeting: 18-19 July 2017 (Netherlands)
- SKA-BD-25 meeting: 8-9 November 2017 (Italy)
- SKA-BD-26 meeting: 11-12 April 2018 (location tbc)

Giovanni Bignami

Chair, Board of Directors

SKA Organisation

6 April 2017