

# Minute and Resolutions of the Fourth Meeting of the BRICS Astronomy Working Group

31 October 2018

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Senior officials and representatives of the BRICS Astronomy Working Group (BAWG) from Brazil, Russia, India, China and South Africa, held a meeting in Durban, South Africa, on 31 October 2018, to deliberate on strategic and operational matters and resolved as follows:

1. The BAWG took note of the various presentations made and broad discussions held on the theme “Ideas for strengthening BRICS astronomy into the future” during the BRICS Astronomy Workshop that took place on 29-30 October 2018, and that this was followed by a site visit to the astronomy facilities of the University of Kwa-Zulu Natal.
2. The BAWG acknowledged the good progress made in all resolutions made at its previous meeting held in India, and the continued spirit of cooperation amongst the partners.
3. A report was presented on the three astronomy projects funded under the 2016/17 BRICS STI Framework. A recommendation was made to have the representatives of these projects invited to present their progress update at the next BAWG meeting and/or the Workshop.
4. The meeting welcomed the planned re-instatement of astronomy as an eligible focus area under the 3<sup>rd</sup> BRICS STI Framework Programme which will be issued shortly through the 2018 Call for Proposals. The astronomy communities in the five BRICS countries are encouraged to submit proposals in the categories of cosmology, galaxy formation and evolution, stellar and compact object astrophysics, big data science in astronomy, and astronomy-related instrumentation, technology, and infrastructure.
5. To assist in identifying a more limited number of projects as candidate flagship projects for the BAWG from the list of eighteen proposals presented during the 2018 BRICS Astronomy Workshop, a task team was set up during the Workshop with experts from each BRICS country. The task team was mandated to cluster the proposals where possible, to reduce their number, and then shortlist 3 projects that the task team recommends should be taken into the next phase of conceptualisation. The Workshop provided input to the task team on various criteria that should be used in shortlisting the preferred projects for consideration by the BAWG. After deliberating on the report from the task team, the BAWG adopted the following three thematic areas for further development towards proposals:
  - a. Optical transient network
  - b. Neutral Hydrogen / 21 cm cosmology
  - c. Big data infrastructure collaboration towards Square Kilometre Array (SKA), Large Synoptic Survey Telescope (LSST) and other future large-survey projects

6. The proposals from the above thematic areas will be developed further along the format detailed below, and submitted to the Secretariat by 1 May 2019 for consideration through relevant government and other funding sources. The secretariat will prepare a proposal template by 15 November 2018, and the proposal should not exceed 20 pages. The proposals should strive to meet the following criteria as far as possible:
  - a. Representation and involvement by all BRICS countries where possible but with a minimum of three countries. Permission should be sought from relevant facilities where applicable.
  - b. Scientific excellence.
  - c. Socio-economic impact which includes but is not limited to technology development and transfer, outreach, human capital development programmes (student exchanges, etc.), relevance to the Next/4<sup>th</sup> Industrial Revolution, involvement of the private sector.
  - d. Leveraging of existing and future national projects.
  - e. A project plan detailing capital and operational expenses, and timelines should be clearly articulated.
  - f. A scalable project with a phased approach.
7. The secretariat will communicate with the principal investigators of the submitted concept proposals for the flagship projects about the outcome of their submissions by 15 November 2018. The secretariat will submit a concept note of the flagship proposals to be ready for the next BRICS senior officials meeting by 15 January 2019.
8. The secretariat will work together with the representatives of the working group in each country to determine the most appropriate process of evaluation of the submitted flagship proposals.
9. The BAWG and the Workshop was held back-to-back with the BRICS Astrophysics, Gravity and Cosmology Conference, with a view to initiate exploratory talks on possible collaborative efforts between this bottom-up initiative and the BAWG. It is expected that engagement will continue on this and the Secretariat will monitor developments and report back when necessary.
10. The meeting congratulated and thanked the government of South Africa for hosting the BAWG and Workshop in Durban.
11. Brazil and China offered to host the next BAWG meeting and Workshop. The working group decided to hold the next two annual meetings in Brazil and China respectively, and the working group thanked the two countries for the offers.