



LETTER TO THE EDITOR

Brics Astronomy Partnership

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All Brazil, Russia, India, China and South Africa (BRICS) countries have a tradition for excellence in Astronomy, with many scientists over the centuries making important contributions to this field of endeavour. Individually, each of the BRICS countries have unique telescope infrastructures, areas of scientific and technical strengths, expertise in instrumentation development, theoretical and computational excellence, industrial capabilities, and education and training opportunities. BRICS countries participate in various international projects that open the possibilities for access through collaborations. Together, BRICS as a block has significant capacity that should be harnessed to ensure that BRICS is able to play a leading role in world astronomical sciences and facilities. Industrial cooperation is also essential and must be vigorously explored.

At the first BRICS Science, Technology and Innovation (STI) Ministerial Meeting which was held in Cape Town on 10 February 2014, five priority areas to be led by the respective BRICS member countries were endorsed. South Africa was given the responsibility to lead the astronomy priority area, and consequently chairs and provides the secretariat for the BRICS Astronomy Working Group (BAWG). The BAWG provides a platform for BRICS member countries to engage on policy issues and other matters related to research, development and practice in astronomy, and to explore mechanisms for promoting BRICS cooperation in astronomy (Buckley et al. 2021). The Department of Science and Innovation of South Africa acts as the secretariat to the BAWG and is responsible for:

- Dissemination of information to the BAWG using various media, including a website;
- Organising annual meetings – organising a venue and meeting facilities, meeting agendas and relevant documents, as well as coordinating experts to develop topics of common interest; and
- Capturing proceedings of the BAWG.

The mission of the BAWG is to promote cooperation between BRICS member countries in the field of astronomy and enabling technologies, through joint activities of government, universities, research institutions, and industry, as relevant, in order to develop astronomical sciences, generate new knowledge, train human capital, develop new technologies and applications, and improve public understanding of science.

ACTIVITIES AND ACHIEVEMENTS

A total of five BAWG meetings have been held, starting with the inaugural meeting in Cape Town in 2015, the second in Ekaterinburg in 2016, and the third one in Pune in 2017, the fourth one in Durban in 2018 and the fifth one in Rio de Janeiro in 2019. During these five years, the BAWG managed to achieve the following:

- The Terms of Reference for the BAWG was adopted and it defines the mandate, scope of work and roles and responsibilities of each party;
- A strategic plan was developed and adopted – it is called the 2017-2020 BRICS Astronomy Framework for Scientific Cooperation, and it defines the priority areas of cooperation and the modalities of engagement. The priority science areas identified include but not limited to cosmology, galaxy formation and evolution, stellar and compact object astrophysics, and big data.
- A website for the BAWG has been established - <http://www.bricsastronomy.org/>

Meeting in Rio de Janeiro in 2019

The BAWG from Brazil, Russia, India, China and South Africa, as well as astronomers from these countries attended the 2-day workshop on *Multi-messenger and Multi-wavelength Astronomy*, in Rio de Janeiro, Brazil, on 02 October 2019.

Main outcome of this meeting

It was agreed that the BAWG will work on one joint flagship project that is known as the *BRICS INTELLIGENT TELESCOPE AND DATA NETWORK*. The project is led by Dr David Buckley from South Africa as the main principal investigator and he will be working with a team of principal investigators from each of the BRICS countries. A fully costed and detailed project proposal has been developed and will be submitted to the BRICS governments to assist with the funding.

CONCLUSIONS

- A networked community of astronomers and relevant government officials in the relevant science ministries has been developed and is working reasonably well together.
- The BAWG has therefore laid a good foundation in the past five years and the challenge is now to take the cooperation to the next dimension of working together on a real project.

REFERENCES

BUCKLEY DAH, TAYLOR AR & DE ALMEIDA UB. 2021. Towards a BRICS Astronomy Network. *An Acad Bras Cienc* 93: e20201759.

How to cite

NEMAUNGANI T. 2020. Brics Astronomy Partnership. *An Acad Bras Cienc* 93: e20201624. DOI 10.1590/0001-3765202120201624.

*Manuscript received on October 10, 2020;
accepted for publication on October 25, 2020*

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