## Convention Square Kilometre Array Observatory Submission 8



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Committee Secretary
Joint Standing Committee on Treaties
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**Dear Secretary** 

I am writing to you to express the strong support of Curtin University for Australia's participation in the Square Kilometre Array (SKA) through its ratification of the *Convention establishing the Square Kilometre Array Observatory*.

Curtin University has a strong history of participation in the SKA project, extending more than 20 years, dating back to the late Professor John de Laeter's contributions around proposed locations to site the SKA in Western Australia.

Today, the SKA is on the brink of becoming a treaty-level organisation charged with constructing and operating the billion euro SKA, involving some of the largest and most complex scientific infrastructure ever conceived. Half of the SKA infrastructure will be hosted in Western Australia and the operational lifetime of the SKA will be measured in decades.

Over the last 20 years, Curtin University has participated in the SKA project at state, national, and international levels. We have made this choice, motivated by the unique opportunity to take a leading role in an international project focused on fundamental research in physics. We have also been motivated by the opportunity to use the SKA project to develop and enhance Western Australian and Australian industry, develop multi-disciplinary skills and training at undergraduate and postgraduate levels, and inspire primary and high school students in a wide range of STEM activities. We have seen significant direct benefits in each of these areas, at local and national levels.

Curtin University established the Curtin Institute of Radio Astronomy to manage and host our various involvements in the SKA project. These activities include our most significant single activity, the Joint Venture with The University of Western Australia in the International Centre for Radio Astronomy (ICRAR; funded by the WA State Government and the Joint Venture over the period 2009 – 2024). Our submission to this committee should be seen as complementary to the submission from ICRAR on behalf of the Joint Venture partners.

Other highly significant Curtin University activities include leadership of the Murchison Widefield Array (MWA) project, a \$50M precursor for the SKA in Australia. The MWA project is a consortium of 21 organisations in six countries and has been operational since 2013. The MWA has generated hundreds of high-quality research publications and is training hundreds of researchers in the science and engineering required to support the SKA, positioning Australian researchers to take leadership roles in the SKA era.

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The MWA has also provided a platform for the development and prototyping of SKA technologies that now form part of the final design of the SKA. This has been supported financially by the Federal government's SKA programs and has involved close collaboration with international SKA partners, in particular from Italy, the Netherlands, and the UK.

Curtin has supported two Australian Research Council Centres of Excellence, with a focus on key areas of astrophysics research relevant to the SKA.

All of Curtin's technical and scientific contributions in these areas have aligned with Australia's national and international SKA imperatives and have meshed with the organizational steps that have led to the ratification of the SKA Convention.

We are therefore very pleased that Australia is moving to ratification, as participation in the SKA will bring substantial benefits to Western Australia, Australia, and the world.

Yours sincerely

Professor Chris Moran Deputy Vice-Chancellor, Research