Submission No. 15 Rec 22/9/08
(Australian SKA Pathfinder Radio Telescope)

Association of Canadian Universities for Research in Astronomy
Athabasca University Bishop's University Brandon University McGill University McMaster University Queen's University Saint Mary's University
Trent University University of Alberta University of British Columbia University of Calgary Université Laval University of Lethbridge University of Manitoba
Université de Montréal University of Regina University of Toronto University of Victoria University of Waterloo University of Western Ontario York University
Association canadienne d'universités pour la recherche en astronomie

September 2, 2008

The Secretary,
Public Works Committee,
Parliament House
Canberra ACT 2600
Australia

Dear Secretary

The Association of Canadian Universities for Research in Astronomy (ACURA) was created in 2003 to facilitate the coordination of activities and collaboration in astronomy between degree granting institutions. ACURA currently regroups 21 Canadian universities. In concert with the Canadian Astronomical Society, the Herzberg Institute of Astrophysics (HIA) of the National Research Council Canada and Canadian industries, ACURA actively supports the development of the Long Range Plan for Canadian Astronomy and Astrophysics. A key element of this Plan is participation in the development and science use of the Square Kilometre Array for the benefit of Canadian universities and researchers.

SKA has been identified by Canadian astronomers as a unique world facility that will be necessary to advance our understanding of fundamental questions in cosmology, astrophysics, astrobiology and physics. It will be one of the largest scientific projects ever undertaken, designed to answer some of the big questions of our time: What is Dark Energy? Was Einstein right about gravity? What is the nature of dark matter? Can we detect gravitational waves? When and how did the first stars and galaxies form? What was the origin of cosmic magnetism? How do Earth-like planets form? Is there life, intelligent or otherwise, elsewhere in the Universe?

The SKA requires a leap in radio frequency design and engineering, information technologies, and radio observational techniques. The world community is engaged in a collaborative research, development and design program. The leap to the SKA is so great that it is essential to construct a "pathfinder" to test and demonstrate new technologies. The Australian SKA Pathfinder is thus a critical stage in the SKA development. ASKAP will prototype key enabling technologies on the SKA innovation pathway; in particular, new radio receiver systems for wide field-of-view imaging, and the associated digital signal processing, and computer and information technologies. ASKAP will also be powerful enough as an astronomical facility to exploit these technologies to advance several key SKA science goals, thereby "pathfinding" important elements on the scientific journey to the SKA.

Recognizing the importance of ASKAP to the international SKA program, Canadian engineers and astronomers are collaborating with Australia on the technical development and scientific planning for ASKAP. This collaboration, which forms part of the Canadian SKA program plan for 2008-12, is being formalized through a Memorandum of Understanding with the Australia Telescope National Facility. Scientists from six Canadian institutes helped craft, with our Australian colleagues, the document "Science with ASKAP", which describes the important scientific inroads that ASKAP will make in the direction of the SKA. Contributions to the technical design of ASKAP are being made at HIA and at three Canadian universities.

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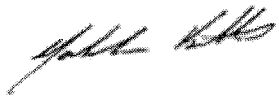
The ACURA Board applauds the initiative by the Australian government to develop an SKA science and technology pathfinder, and in doing so develop and protect for radio astronomy the proposed SKA site in Western Australia. We look forward to a fruitful collaboration between Canada and Australia leading to a successful astronomical demonstration of technology innovations for the SKA and a significant scientific step toward the SKA.

Yours sincerely,



Professor Malcolm Butler
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Milner, Gaye (REPS)

From: René Racine, ACURA [acura@astro.umontreal.ca]
Sent: Friday, 5 September 2008 12:10 AM
To: Committee, Public Works (REPS)
Cc: Malcolm Butler
Subject: NMcGack:submission for the Australia SKA Pathfinder (ASKAP) Review

Importance: High

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Sir/Madam

Our submission to your Committee re: ASKAP is attached.

Respectfully

Rene Racine
Executive Director
ACURA