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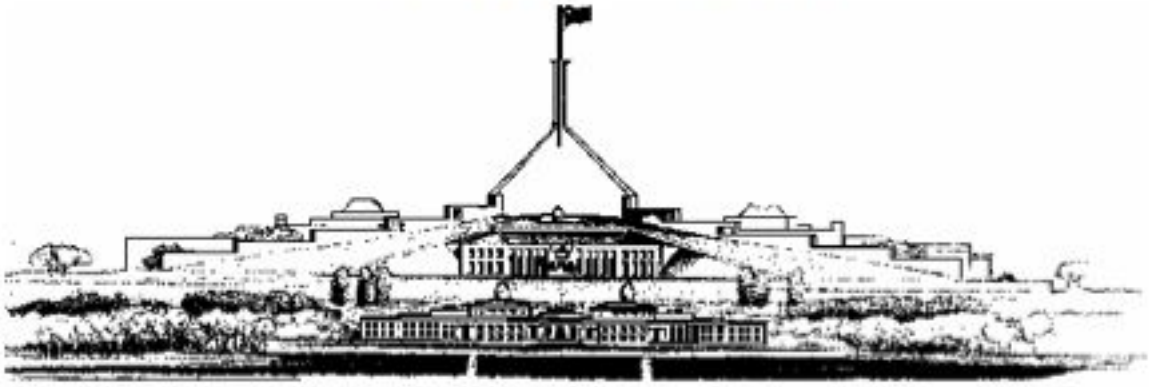

HOUSE OF REPRESENTATIVES

Federation Chamber

PRIVATE MEMBERS' BUSINESS

Square Kilometre Array Radio Telescope Project

SPEECH

Monday, 1 December 2014

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES

SPEECH

Date	Monday, 1 December 2014	**Source**	House
Page	13805	**Proof**	No
Questioner		**Responder**	
Speaker	Andrews, Karen, MP	**Question No.**	

Mrs ANDREWS (McPherson) (12:54): I move:

That this House:

(1) acknowledges the key role that Australia is playing in the international Square Kilometre Array (SKA) project to build the world's largest radio telescope;

(2) welcomes the recent news that the CSIRO's Australian SKA Pathfinder telescope in Western Australia, an important precursor to the international SKA, has been trialled very successfully with encouraging results;

(3) recognises the technology employed in this ground breaking project has potential applications extending far beyond radio astronomy; and

(4) congratulates the Australian scientists, led by SKA Australia Director, Professor Brian Boyle, working with the international community on this project.

I am delighted to bring to the attention of the House, through this motion, the leading role Australia is playing in what is described as the most extensive science collaboration in the world.

As chair of the Parliamentary Friends of Science, together with the member for Corio, I was pleased earlier this year to host a special briefing for MPs on the Australian Square Kilometre Array project and the implications for a range of scientific advancements. During my speech today, I will be referring to documentation that has been prepared by the CSIRO—their fact sheet on ASKAP. I also refer members directly to the website ska.gov.au for a very comprehensive overview of this project.

The ASKAP telescope will help us to understand how our own galaxy has developed and its current structure. It will also be a world leader in the study of pulsars, transient radio sources and magnetic fields in space and will help to cast light on fundamental physics and processes at work in the universe. The technology that is required to construct this project really does help to push the technological boundaries. The SKA will be a complex system incorporating a range of different radio receiver types and communications equipment, several supercomputers and novel cooling and energy generation technologies.

The Square Kilometre Array project currently has 11 partner countries, with more than 100 institutions in 20 countries contributing. It is a testimony to our Australian scientists and the will of government and industry that Australia won the bid to co-host one of the two major telescopes that will help establish the SKA telescope. The ASKAP is a large-scale, world-leading, pioneering astronomy infrastructure installation of 36 antennas in remote Western Australia working together as a single instrument. The design of ASKAP is unique among radio telescopes. Its antennas feature three-axis movement and will use phased array feeds rather than single pixel feeds to detect and amplify radio waves—a development being pioneered by CSIRO especially for ASKAP. These attributes mean that the telescope will survey large areas of sky with unprecedented speed and sensitivity. Initial testing that was carried out earlier this year showed that ASKAP was breaking new ground in radio astronomy technology and performing superbly. The test results showed that it was well on course to achieve its ambitious science goals.

The decision to build ASKAP was made in the 2007 budget under then science minister Julie Bishop, at the same time the Howard government decided to bid to host the SKA. ASKAP was constructed over the period 2007 to 2012 at a cost of $188 million. It is now in its commissioning phase and is showing very promising results. Next year, the formal science program is due to commence.

It is very fitting that we take time today to recognise the team involved in the SKA project here in Australia. As a nation, we are very good at recognising our sportspeople, entertainers, artists, writers and even doctors when

they achieve international success. We are less likely to publicly applaud our world-class scientists. I am sure that far fewer people have heard about the big wins our SKA team have had than the loss the Wallabies suffered to Ireland. That is a great pity and something I would really like to see change. We often talk about the need to get more students studying maths and science at school. Perhaps, if they heard more about these exciting scientific developments, they might be encouraged to do so. The fact is that last month two of the teams involved in the SKA project were joint recipients of the 2015 Breakthrough Prize in Fundamental Physics, one of a cluster of prizes awarded at a star-studded awards ceremony at Silicon Valley in the United States. Then, just last week, the SKA team were the overall winners of the industry minister's fourth annual Australian Innovation Challenge. Not surprisingly, the judging panel found that ASKAP illustrated the characteristic Australian ingenuity that has led to our greatest scientific ideas and breakthroughs.

I again take the opportunity to congratulate everyone involved. I especially recognise Professor Brian Boyle, who was project director and who led Australia's bid to host the SKA. In 2013 he received the Public Service Medal for his work, and he has received numerous awards for his research. He is one of the finest astronomy researchers in the world. Australians should all be proud of our world-class scientists and the vital role our nation is playing in this major international scientific collaboration.