



SKA PROJECT - ONE STEP CLOSER

18th December 2001

Funding to examine potential sites for an SKA radio telescope in South Australia has been allocated by the Department of Industry and Trade (DIT).

Member for Flinders Liz Penfold said this is a positive step on the way to attracting the multimillion dollar internationally funded project to this state.

The project aims to build a Square Kilometre Array (SKA) radio telescope that will be about 100 times more sensitive than any existing telescope to study and explore outer space.

Mrs Penfold said a total of \$400,000 to December 2003 would be required to fully examine potential sites, identify the most suitable one, and undertake progressively more sensitive technical assessments.

Minister for Industry and Trade, Rob Lucas said the first step in the evaluation process will involve the development of a site analysis program (working with CSIRO's Dr Bruce

Thomas), and a fully costed project brief that is scheduled to start this month.

"I believe PIRSA is already beginning a GIS analysis of the three prime South Australian sites that were identified in the preliminary research," he said.

Mr Lucas said DIT staff are monitoring the project to ensure that opportunities for South Australian companies to participate in it are maximised, wherever the project is ultimately sited.

Mrs Penfold said Australia is one of the few locations in the world with suitable site conditions for SKA.

POSITIVE STEPS TOWARDS SKA PROJECT

22 AUGUST 2001

Member for Flinders Liz Penfold said she is delighted that the Federal Government is putting in \$23.5 million for Australia's bid for the Square Kilometre Array telescope (SKA).

"This is a positive step towards Australia securing this multibillion dollar international project that could come to Eyre Peninsula," she said.

Mrs Penfold said the grant for research into Australia's astronomy future was the highest for projects approved under the Federal Government's Major National Research Facilities Program.

“A decision on the SKA’s location is not expected for about five years. This preliminary research is essential in supporting Australia’s bid,” she said.

Senator Nick Minchin, Federal Minister for Industry, Science and Resources, this week announced the 15 successful projects from the 86 proposals received.

Mrs Penfold said another exciting development is the CSIRO’s proposal to set up a schools science project (for which CSIRO is currently seeking funding) associated with the SKA telescope.

“I was absolutely thrilled to be invited to nominate a school from Eyre Peninsula given my involvement to date in the SKA project.

“I chose Kimba because it is the nearest school to one of the preferred sites in Australia for this multibillion dollar internationally-funded project,” she said.

Mrs Penfold said the school project may include students from Cowell, Cleve and Wudinna Area Schools.

“Kimba principal Kevin Mooney and his staff are very supportive of this exciting project that is a once-in-a-lifetime experience for students.

“It opens the doors to many occupations and professions that students may otherwise never know anything about,” she said.

Kimba Area School will be one of five schools across Australia participating in the first stage of the CSIRO Australia Telescope National Facility’s Radio-Science Outreach Project being coordinated by Dr Michelle Storey, SKA Outreach Project Officer.

Schools science project

The Radio-Science Outreach Project will be run as a collaboration between the Molonglo Observatory Synthesis Telescope (MOST) in the University of Sydney and CSIRO Australia Telescope National Facility (ATNF).

Senior students from five high schools – two in country Western Australia, one in country South Australia, one in country New South Wales near the MOST, and one in Sydney will participate in 2002, with a further five schools possibly being included in 2003.

The students will measure background levels of radio-frequency radiation in their area and compare results from different areas via a web conferencing system and web database. Students will report on the results to other students and to community and business groups.

Radio-frequency science is fundamental to the telecommunications industry, a core industry of the New Economy. The project will raise awareness of the importance of the radio-frequency spectrum to industry and society, and will raise awareness of the strengths in Australia in radio-science. Students will be encouraged to consider careers in radio-science.

Australia is a world leader in the science of radio astronomy, a field that is at the high-technology edge of radio-frequency science. In addition, Australia’s geographic isolation and low population density, and resulting radio-quietness, gives Australia a natural advantage that makes us a good candidate host country for the Square Kilometre Array telescope, an international next-generation radio telescope that will bring enormous scientific and economic benefits to the host country.

Square Kilometre Array (SKA) telescope

The grant to fund the Australian Astronomy Major National Research Facilities proposal will allow research to be conducted at Gemini Observatories in Hawaii and Chile, Sydney and regional Australian centres.

The SKA is a billion-dollar internationally funded project to build a radio telescope that will be about 100 times more sensitive than any existing radio telescope.

The construction of an SKA prototype is a long-term strategic project that will assist Australia in securing a significant role in the scientific exploration of the universe. It will assist Australia to attract part of the multi-billion dollar global business in astronomical technology to Australia, including the SKA to rural Australia.

Australia is one of the few locations in the world with suitable site conditions for SKA.

The facility integrates and develops Australia's research capability in two areas of recognised strength – optical/infrared and radio-astronomy. It amplifies this strength by coordinating existing facilities, and placing Australian instrument builders and industry in a prime position to capitalise on the new generation of astronomical instrumentation.

SITES FOR SKA IDENTIFIED 24 JANUARY 2001

Member for Flinders Liz Penfold said Eyre Peninsula is well placed to be chosen as the site for an internationally funded billion dollar radio telescope. Two sites have already been identified as possibly being suitable.

The Square Kilometre Array (SKA) radio telescope has the ability to probe back in time to collect data on the origins of the universe.

Mrs Penfold said Australia, as a major player in the seven-member international consortium, is planning and promoting the new instrument to be located in the Southern Hemisphere.

"The international committee is expected to make a final decision on the site in 2005, and construction will take 10 years," Mrs Penfold said.

The telescope must be sited in a radio-quiet reserve 50 kilometres in diameter and surrounded by a 10 kilometres wide protection zone. The chosen site will need to be remote from intensive mining and other incompatible activities, and be accessible by fibre-optic cable.

Mrs Penfold said she has already discussed the suitability of Eyre Peninsula with several of the principals in the project.

"Our region, with abundant unoccupied land, relative radio quietness, good scientific and engineering infrastructure, and a stable political environment, is clearly desirable.

"Upper Eyre Peninsula is also central to Australia which would allow the 100 to 1000 small array stations associated with the telescope to fan out across the nation.

"A telescope built at moderate southern latitudes gets an excellent view of the astronomically-rich centre of the Milky Way," she said.

She said that Australian research institutions currently involved with the SKA project include CSIRO, the University of Sydney, and the Australian National University.

Mrs Penfold has spoken with Professor Ekers, director of CSIRO's Australia Telescope National Facility (ATNF), and graduate of the Adelaide University.

Professor Ekers is a member of the formal Australian SKA Consortium whose policy committee will hold its first meeting in Sydney on 8 and 9 February 2001.

His professional career has taken him to the United Kingdom, The Netherlands, and the United States of America.

More information can be obtained from the internet. One site is <http://www.atnf.csiro.au/>

Professor Ekers and other distinguished astronomers from across the world are planning to be in Ceduna to watch the path of the total solar eclipse on 4 December 2002 when more than 26,000 visitors are expected to swell the population of the town for the event.

The eclipse path begins in the ocean west of Africa before making its landfall at Ceduna late in the afternoon (local time). The duration is only 32 seconds at Ceduna.

Mrs Penfold said the eclipse will provide a wonderful opportunity to show the world decision makers our radiotelescope sites at first hand.

Mrs Penfold has written to Premier John Olsen, State and Federal members to alert them to this opportunity for regional South Australia.

She is organising a briefing for the Government by the CSIRO during the next sitting of Parliament.