



SKA in Australia: Ron's influence

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CSIRO ASTRONOMY AND SPACE SCIENCE
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A brief early history of SKA in Australia

Initiating SKA in Australia

- July 1994 - **NCA Science Meeting**
 - Talk by Ron – start of SKA in Australia?
- April 1995 – **Sydney 1kT workshop**
- 1995 – **Australian decadal review ‘Beyond 2000’**
 - Decadal review process started by Ekers as Chair of NCA
 - Moved NCA into central role
 - 1kT listed as \$200m - Australian contribution \$30m
- 1996 – MoU for joint development towards very large telescope
 - Signed by CSIRO as Australian partner
- Jan 1997 – 1kT and RFI excision workshop in Sydney
- June 1997 – first meeting of OECD Megascience Working Group on radio astronomy in Paris
 - First links into Australian government through DFAT



Presentation to John Howard

December 1998

- Second meeting of the Prime Minister's Science and Engineering Innovation Council – chaired by PM
- Part of presentation of the 'Megascience Working Group', chaired by Professor Vicki Sara
 - Also looked at Global Biodiversity Information Facility
- PM summarised the outcome in three sentences
 - i) It is most surprising how events of national interest arise from such unexpected directions
 - ii) The public seem to like astronomy
 - iii) I propose that the government support this initiative



Progressing SKA in Australia

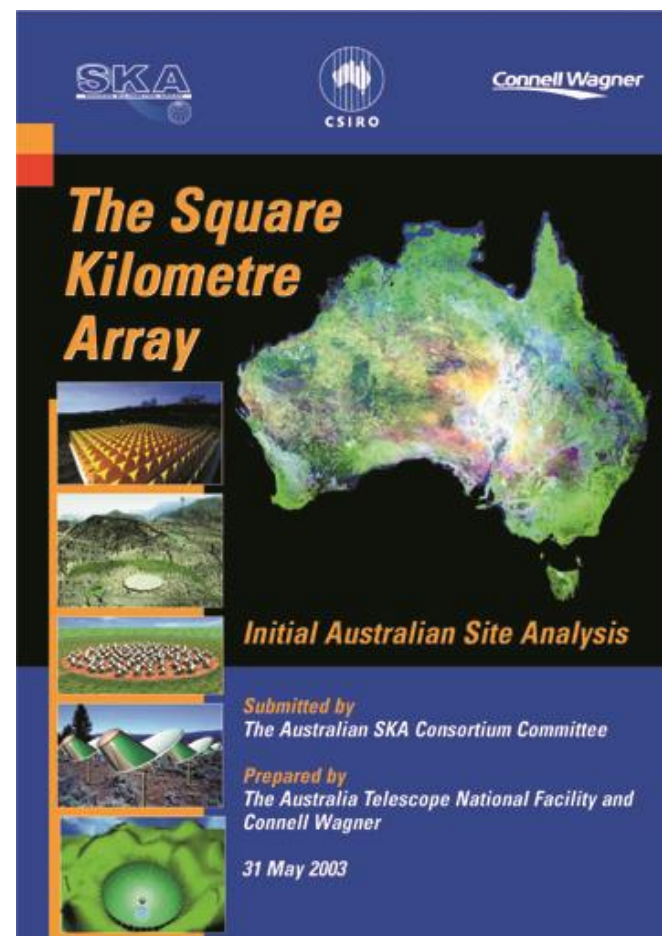
- 2000 – Australian SKA Consortium formalised
 - Link to Academy through NCA
 - First chair was Bob Frater
- Feb 2001 – First meeting of Australian SKA Committee (ASKAC)
- July 2003 – Geraldton ‘International SKA Workshop’
 - Ron introduces dishes+PAFs – start of ASKAP
 - Intermediate step between single pixel dishes and aperture arrays
- 2006 – Site downselect – Australia and SA

Areas of influence

- SKA site
- SKA technologies
- SKA governance

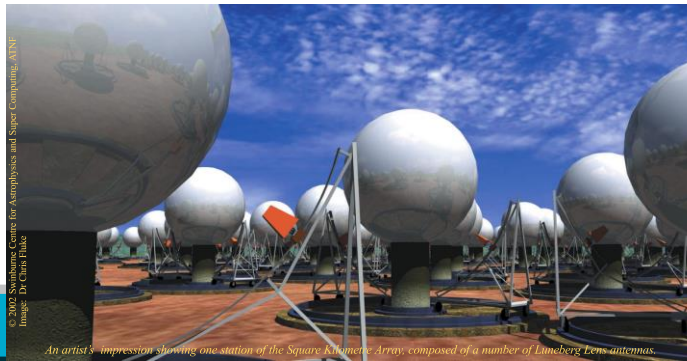
Australian SKA Site

- Sept 1996 – First SKA site study in Australia
 - Woomera area in Northern South Australia
- Long history of site studies and analysis, including sites in WA, NSW and SA, led by Bruce Thomas.
- Mileura chosen in site downselect– later moved to Boolardy
- Ron heavily influential
 - Funded initial site work as ATNF Director
 - Employed Michelle Storey under his Federation Fellowship as Strategic Relationships Manager
 - Supported an engineering position in ACMA for radio quiet



Technologies and Innovation

- Ron's vision of SKA - pushing boundaries of innovation
 - Luneburg lens, cylindrical reflectors, PAFs
 - Cheap dishes - 'do it all in software'
- Built a team to work on future technologies
 - Protected from other pressures
 - Willing to explore new ideas – see what works
- MNRF grant application
 - Request to government in 2000 – led by Ray Norris
 - \$60m for radio and optical – including nTD
 - Ron as 'puppeteer'



Governance

- Provided the vision for SKA – eg presentation to ATUC
- Australian SKA Committee
 - Included science, government and industry
 - Links with defence
 - WA government support
 - ‘Unified team’
- Saw the need to work with industry
 - Can’t build SKA in the same way as the Compact Array
 - Not agreed by everyone
- Protected ATNF from CSIRO micro management

SKA Inter-Governmental Organisation negotiations

Inter-Governmental Organisation



- SKA Member governments are negotiating the establishment of an intergovernmental organisation (IGO), similar to ESO/CERN/ITER/ESA.
- Will provide:
 - Long-term government commitment and funding stability
 - Availability of Privileges and Immunities from members
 - ‘Freedom to operate’, specifically through procurement process
- NISA announcement of \$293.7m for SKA: needs Cabinet approval for release



IGO: formal negotiations



- Rome: 14-16 October; 26–28 January; 19-21 April; Minister Vicente (Italy) – Chair.
- All 10 countries present
 - Canada observer
 - Germany likely to observe at next meeting
 - All parties put initial funding on the table – total (before negotiation) = 80%
- Next meeting end Sept
 - Aiming for approved text
 - Signing by end of year?



Working Groups



- Finance
 - Chair - Adrian Tiplady, SA
 - Privileges and Immunities
 - Chair - Adam Baker, UK
 - Procurement and IP
 - Chair – Jing Guifei, China
 - Operations and Access
 - Chair - Sarah Pearce, Australia
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- Convention Task Force to deal with outstanding issues



Main outstanding issues

- Procurement
 - High level principles agreed – fair work return - but work to do on details
- IP
 - Discussion on whether IP will available for non-SKA purposes
- SKA Regional Centres
 - Do they contribute to share in the project?
- Finance
 - Proportion to be contributed by each country
 - SKA DG and Board Chair visiting each Member government
- Weighted voting

Balancing open skies with political drivers

- Strong push for funding-based access from some governments
- But also desire from science community for open skies – best science
- Most time (95%) to be allocated to astronomers from SKA Members
 - Key Science Projects and PI-time
- 5% Open Time
- Countries able to add ‘their’ share to Open Time.

Access to SKA

- Consensus reached in IGO negotiations
 - The allocation of time on telescopes will be based on scientific merit and technical feasibility, evaluated via a common time allocation process.
- **“Section 4: Member Time**
 1. The SKA Observatory will operate on the principle that Access is proportional to Members’ share in the project.
 2. The Council will agree a metric to enable monitoring and review of the level of Member Access.
 3. Performance against that metric will be monitored and reviewed by the SKAO Council over a time period to be determined by the SKAO Council.
 4. Following a review in accordance with paragraph 3, and at the request of a Member, the SKAO Council may direct the Director-General to take measures to more closely align that Member’s Access with their share in the SKAO Project. The SKAO Council will make provision to allow Access for SKAO Staff.”

“Ron has a unique skill of making people feel special even when he’s running rings around them”

Always remains focused on the science, while dealing with changing circumstances

Plays to people’s natural strengths – “doesn’t try to fit square pegs in round holes”

Would SKA in Australia exist without Ron?

