



NCRIS

National Collaborative Research Infrastructure Strategy

Optical and radio astronomy

Australian astronomy is acknowledged internationally as world-class with strengths in ground-based optical and radio observational work, backed by complementary abilities in theory and computation. Indeed in the past decade Australian researchers have played leading roles in major discoveries such as the existence of dark energy, the acceleration of the universe, a new type of galaxy, a unique double pulsar and planets orbiting other stars.

The \$45 million the Australian Government is committing to astronomy through the National Collaborative Research Infrastructure Strategy (NCRIS) will support a range of projects to help ensure that Australian astronomers stay internationally competitive and have access to the facilities they require.

The NCRIS investments will be managed by a new organisation, Astronomy Australia.

The largest ever

The new Mileura International Radio Array (MIRA) in Western Australia will receive \$19.2 million that will build on the substantial commitments made by CSIRO and international partners. It is planned for the Mileura Radio Astronomy Park established by the Western Australian Government.

MIRA will be a significant next-generation radio telescope and a demonstrator of what would be the

world's biggest telescope, the Square Kilometre Array (SKA), which may be built in Australia by 2020. If SKA goes ahead it will produce higher resolution pictures than the Hubble telescope, from antennae spread across 3000km, and be capable of looking very close to the remnants of the Big Bang.

Enhancing Australia's optical facilities

Funding of \$10.02 million will go to further develop the Anglo-Australian Observatory at Siding Spring near Coonabarabran, New South Wales. The funds will be used to update the observatory and construct a leading-edge new instrument for the Anglo-Australian Telescope.

Australia is a member of the international Gemini Observatory, which operates two world-leading 8-metre optical telescopes (Gemini North in Hawaii and Gemini South in Chile). NCRIS funding of \$7.16 million will enable Australian astronomers to continue to access the Gemini telescopes which is essential if they are to remain internationally competitive.

The next generation

Funding of \$1 million will go towards paying Australia's contribution to the design and development phase of the proposed 25-metre Giant Magellan Telescope (GMT) in Chile. The GMT consortium is comprised

of the Australian National University and a number of leading American institutions.

A further \$1 million is available for the design and development phase of the proposed Pathfinder for an International Large Telescope (PILOT). The 2.4-metre optical/infrared PILOT telescope may be established in the Australian Antarctic Territory, if feasible, and would likely to be 50 per cent Australian owned and operated.

Other funds will be allocated later to strategic options, such as further upgrades to the Gemini telescopes, further development of the GMT or the construction of PILOT.

A key principle of NCRIS is that the facilities funded by the programme should be accessible to researchers on the basis of merit at reasonable prices, wherever they are located in Australia.

Further Information:

<http://ncris.dest.gov.au>