

# Summary of Linkage Infrastructure, Equipment and Facilities Proposals

## Australian Capital Territory

### The Australian National University

**LE0775546** Prof MS Bessell; Prof MA Dopita; Prof M Colless; Prof RW Hunstead; A/Prof MC Ashley; A/Prof MJ Drinkwater

**Approved Project Title** **Construction of the blue-arm of the ANU 2.3m telescope Wide-Field Spectrograph**

**2007 :** \$ 370,000

**Primary RFCD** 2401 ASTRONOMICAL SCIENCES

#### Partner Organisations & Collaborating Organisations

Anglo Australian Observatory  
The University of Sydney  
The University of New South Wales  
The University of Queensland

**Administering Organisation** The Australian National University

#### Project Summary

The new blue and red arms of the WiFeS spectrograph on the SSO 2.3m telescope utilizes new optical techniques and advances in detector technology to provide unique capabilities for front-line research and student training. The novel integral field units on WiFeS extract spectra across the face of faint, distant galaxies enabling the dynamics of the stellar and gas content to be analysed in unprecedented detail. Another important project will be to follow-up interesting objects discovered by the new SkyMapper telescope and establish those that need to be observed on 8 m telescopes such as Gemini, Magellan or VLT.

**LE0775729** Prof RG Elliman; Prof B Luther-Davies; A/Prof TJ Senden; A/Prof Y Chen; Dr JE Bradby; Dr L Fu; Prof I Jackson; Dr IS Williams; Dr JD Fitz Gerald; Prof RL Withers; Dr S Welch; Dr ZH Stachurski; Dr KJ Weber

**Approved Project Title** **Improved understanding of nanoscale materials - structure, composition, crystallography and defects revealed by electron imaging and analysis at high spatial resolution**

**2007 :** \$ 420,000

**Primary RFCD** 2402 THEORETICAL AND CONDENSED MATTER PHYSICS

#### Partner Organisations & Collaborating Organisations

**Administering Organisation** The Australian National University

#### Project Summary

Modern materials scientists and engineers are driven by world-wide competition to develop new technology and manufactured devices. The trend has for some time been towards miniaturisation and one of the main challenges lies in effectively characterising nanostructures that are produced as a key step in research and development of advanced materials. The proposed electron microscope and detectors will provide a state-of-the-art analytical facility to support the cross-disciplinary materials science and nanotechnology research at the Australian National University. It will also provide an important training facility for students and early-career researchers and will be available to investigators from other Australian institutions.

## Summary of Linkage Infrastructure, Equipment and Facilities Proposals

**LE0775533** Dr M Honda; Dr D Phillips; Prof TM Harrison; Prof JM Chappell; Dr BJ Pillans; Prof GS Lister; Prof LK Fifield; Prof AJ Gleadow; A/Prof BP Kohn; Prof AR Chivas; Prof SY O'Reilly; A/Prof DR Cooke; Prof RG Roberts; Prof CV Murray-Wallace

**Approved Project Title** **A New Generation Noble Gas Mass Spectrometer Facility for Advanced Research in the Earth, Planetary and Environmental Sciences**

**2007 :** \$ 700,000

**Primary RFCD** 2603 GEOCHEMISTRY

### **Partner Organisations & Collaborating Organisations**

The University of Melbourne

University of Wollongong

Macquarie University

University of Tasmania

**Administering Organisation** The Australian National University

### **Project Summary**

The current proposal, to establish a new Noble Gas Analytical Consortium for noble gas chronological and geochemical analyses, will generate new knowledge on the evolution of the Earth, with profound implications for past climate change, landscape evolution, formation of ore bodies, and terrestrial geodynamics. Consequently, the facility will conform to the National Research Priority of 'An Environmentally Sustainable Australia'. The new facility will ensure that Australian research remains at the forefront of international science development and will also provide essential training for the next generation of Australian scientists.

**LE0775510** Dr DA Mitchell; Prof MC Western; Prof MS Humphreys; A/Prof DN Denmark; Prof PG Saunders; Prof HL Kendig; Dr HA Evans; Dr TM Rowse; Dr LR Smith; Prof I McAllister; Ms SK Holloway; Mr SC Hungerford; Dr TL Phillips; Dr AE Smith; A/Prof M Emmison; Dr LA Cheshire; Dr AF Broom; Dr BW Bradbury; Prof RJ Stimson; Dr B Evans

**Approved Project Title** **Australian Social Science Data Archive: Network Extension and Sub-archive Development**

**2007 :** \$ 400,000

**Primary RFCD** 2801 INFORMATION SYSTEMS

### **Partner Organisations & Collaborating Organisations**

The University of Queensland

The University of Western Australia

The University of New South Wales

Australian Consortium for Social and Political Research

**Administering Organisation** The Australian National University

### **Project Summary**

The Australian Social Science Data Archive is a national facility that allows all researchers and members of the public to access a wide range of social science data sets for on-line analysis. The archive contains data that covers forty years of social, political and economic surveys. The archive also acts as a gateway for social science researchers to access data from equivalent overseas institutions in North America, the European Union and OECD countries.