

Summary of Linkage Infrastructure, Equipment and Facilities Proposals

Victoria

La Trobe University

LE0989069 Prof PL Dyson; A/Prof JC Devlin; Dr R Makarevich; A/Prof CL Waters; A/Prof FW Menk; Prof IM Reid; Prof RA Vincent; Prof DA Gray

Approved Project Title **A New Digital Radar for Studies in Solar-Terrestrial and Atmospheric Physics**

2009 : \$ 450,000

Primary RFCD 2606 ATMOSPHERIC SCIENCES

Partner Organisations & Collaborating Organisations

La Trobe University
The University of Newcastle
The University of Adelaide

Administering Organisation La Trobe University

Project Summary

Australia is a world leader in the development of High Frequency (HF) radar surveillance systems, such as JORN (Jindalee over-the-horizon radar). However, Australia's ability to support these operations and remain a leader in these fields depends on its capacity to nurture expertise and train new personnel in these areas. The new HF radar system will play a crucial role in this respect, providing (i) high-level training in radar technology and associated science, (ii) a test bed for the development of new instrumental and data analysis techniques, (c) new information on the source of ionospheric perturbations that can affect the performance of JORN, and (d) data important for Australia's space weather prediction community, via IPS (Ionospheric Prediction Service) Radio and Space Services.

LE0989915 Dr CQ Tran; A/Prof AG Peele; Prof KA Nugent; A/Prof AY Nikulin; Dr J Thornton

Approved Project Title **X-ray Nano-scale Coherence Facility**

2009 : \$ 127,000

Primary RFCD 2404 OPTICAL PHYSICS

Partner Organisations & Collaborating Organisations

La Trobe University
The University of Melbourne
Monash University
Defence Science & Technology Organisation (DSTO)

Administering Organisation La Trobe University

Project Summary

Australia is rapidly developing into a world leader for x-ray imaging. This position has been supported by leading research groups and more recently by the development of the Australian Synchrotron. This project will fill a vital missing link in the experimental capability of Australian researchers - a flexible facility that can provide a nanoscale x-ray source. This enhanced capability will lead to new developments in coherent imaging methods. These new methods will be used in the study of biological systems, leading to better drug design as well as in the study of materials, leading to stronger and lighter components.