

Summary of Linkage Projects Applications for Funding to Commence in 2006

Victoria

RMIT University

LP0669113 Dr D Nugegoda; Dr BJ Kefford; Dr SC Choy

Approved Project Title **Preserving freshwater biodiversity: predictions to manage the effects of suspended sediment and salinity.**

2006 : \$37,170

2007 : \$74,340

2008 : \$74,340

2009 : \$37,170

Primary RFCD 3008 ENVIRONMENTAL SCIENCES

APDI Dr BJ Kefford

Partner Organisation(s)

Queensland Department of Natural Resources and Mines (QNR&M)

Department of Primary Industries, Victoria

EPA Victoria

Corangamite Catchment Management Authority (CCMA)

Administering Institution RMIT University

Project Summary

Natural resource managers wish to minimise deleterious effects of suspended sediment and salinity on biodiversity but do not have adequate knowledge to do so. Increases in salinity and sediment are recognised as the major threats to freshwater biodiversity in Australian rivers. This research will lead to greatly enhanced information on the relative impacts of rising salinity and sediment on freshwater biodiversity and aid predictive modelling and scenario testing; enabling managers to make informed choices between various management actions. The project addresses several national research priority goals and it will result in significant national and community benefits by protecting freshwater biodiversity from salinity and sediment.

LP0669259 A/Prof K Zhang; Dr F Wu; A/Prof P Zeehongsekul; Dr J Sang; Dr CH Smith

Approved Project Title **Precise Atmospheric Density Correction Model Using Space Tracking Data for Accurate Debris Surveillance and Collision Warning**

2006 : \$12,325

2007 : \$24,650

2008 : \$24,650

2009 : \$12,325

Primary RFCD 2606 ATMOSPHERIC SCIENCES

APA(I) Award(s): 1

Partner Organisation(s)

EOS Space Systems Pty Ltd

Administering Institution RMIT University

Project Summary

Our project will build new atmospheric density correction models (ADCMs) for accurate prediction of debris object and satellite orbits. This research will have tremendous impacts on realizing unaided debris laser ranging. An order of magnitude accuracy improvement to the ADCMs will lead to a significant breakthrough in space object tracking. The benefits of this research are: it will put Australia in a leading position in the world on ADCM study; to maintain Australia's leading role in space surveillance and greatly enhanced operational capability & efficiency of Australian space tracking systems; and to contribute significantly to the space environment info management, e.g. accurate collision warning and space junk tracking.