

Summary of Linkage International Awards Proposals

The University of Newcastle

LX0882515 Prof BJ Fraser; Dr CC Chaston; Dr HJ Singer

Approved Project Title **Ring Current and Radiation Belt Dynamics**

2008 : \$ 5,400

2009 : \$ 5,400

Primary RFCD 2606 ATMOSPHERIC SCIENCES

Collaborating Countries

USA

Administering Organisation The University of Newcastle

Project Summary

Outbursts of energy from the Sun manifest themselves as geomagnetic storms in the Earth's magnetosphere. These storms can severely disrupt and damage advanced technological systems operating on the ground and in space. Operational spacecraft may experience anomalies, pipelines in the long term may corrode and the performance of GPS navigational systems, HF (High Frequency) communications systems, mobile/cell telephone networks and defence surveillance radars may be degraded. It is important to understand the magnetospheric conditions contributing to these problems. This research identifies relevant mechanisms. It also enhances Australia's international space research profile, contributes to Australia's future and supports excellent postgraduate training.