



Australian Government
Geoscience Australia



Committee on Earth Observation Satellites

27th CEOS Plenary
Montréal, Canada
5-6 November, 2013



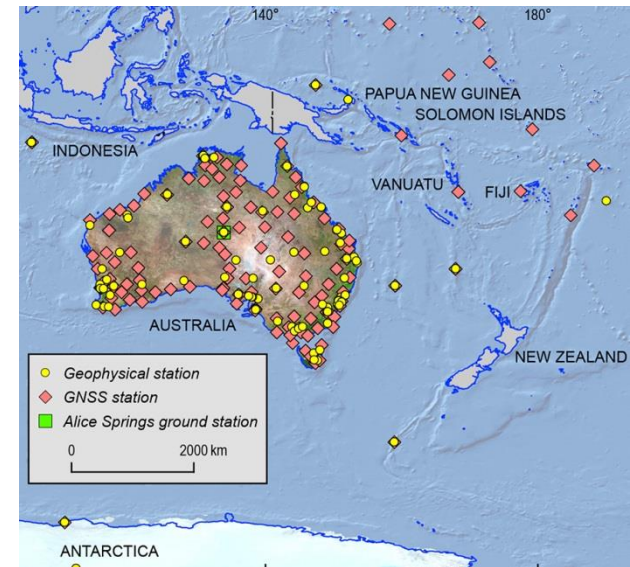
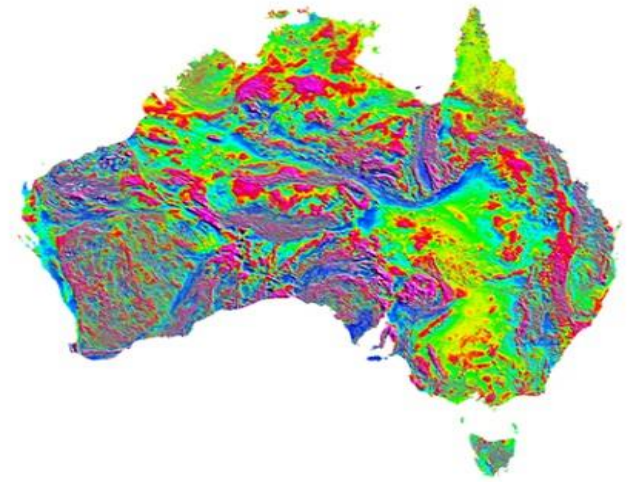
Application for Associate Membership

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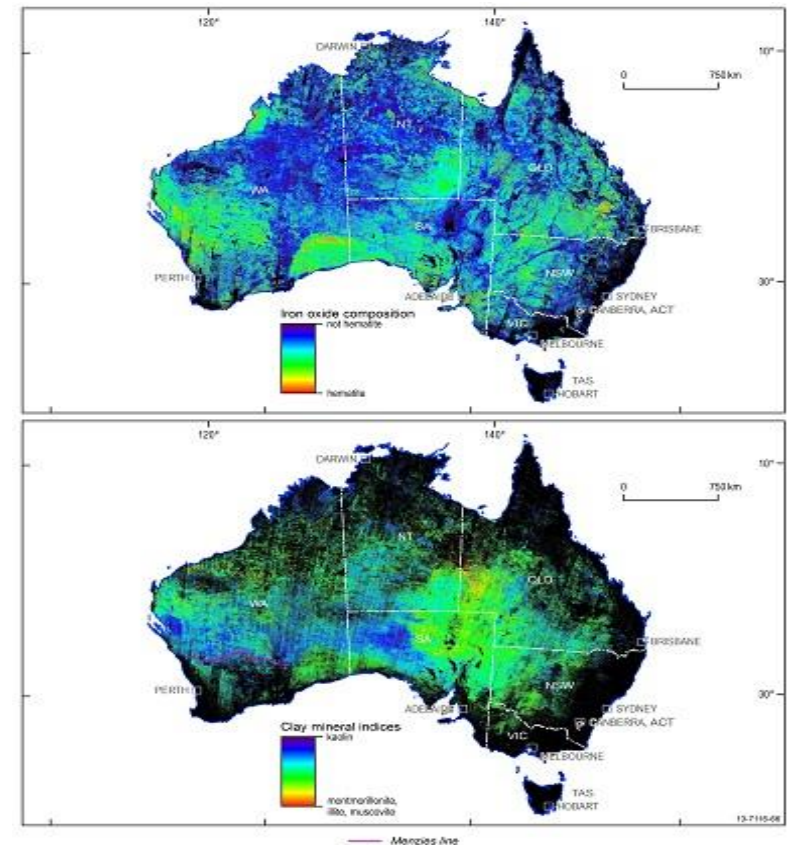
About Geoscience Australia

- Australia's national geoscience agency
- Annual budget AUD\$200m
- Employs 730 staff
- Applies geoscience to government priorities:
 - Resources and energy
 - Marine estate management
 - Community safety
- Network of remote sensing, geodetic and geophysical observatories



National Earth Observation Program

- Annual investment of AUD \$7 million and 40 staff
- Applies EOS to government priorities
 - Wild-fire monitoring
 - Data to encourage resources and energy exploration
 - Flood mapping
 - Surface water mapping
 - Forest monitoring
 - Monitoring of land-cover changes

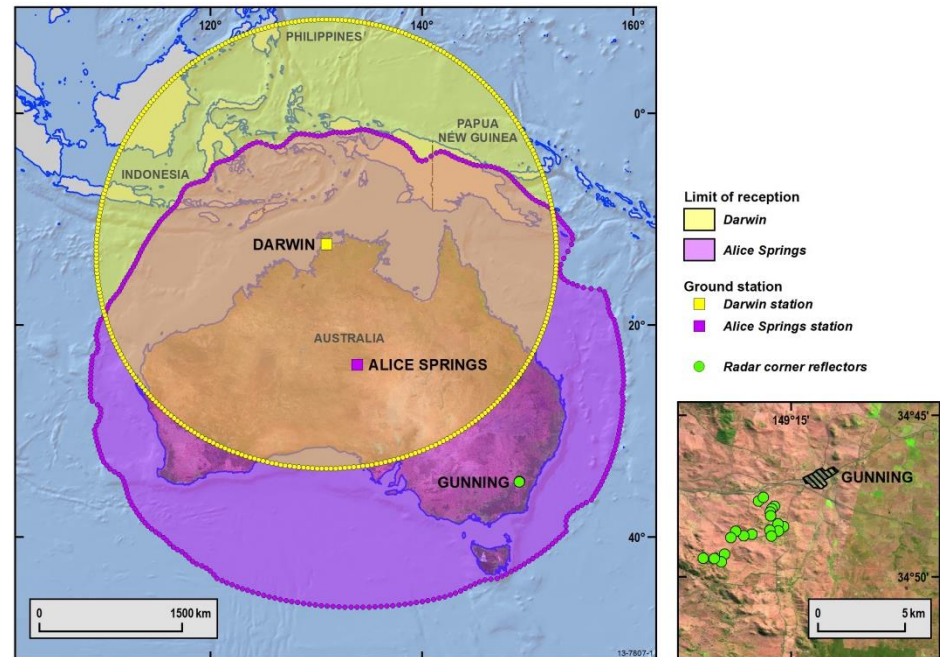


ASTER Map – Pre-competitive data for industry

EOS Capability

Ground segment

- Alice Springs ground station
- Darwin ground station
- Corner reflector network
- Data transmission and distribution network
- Automated near-real-time processing systems



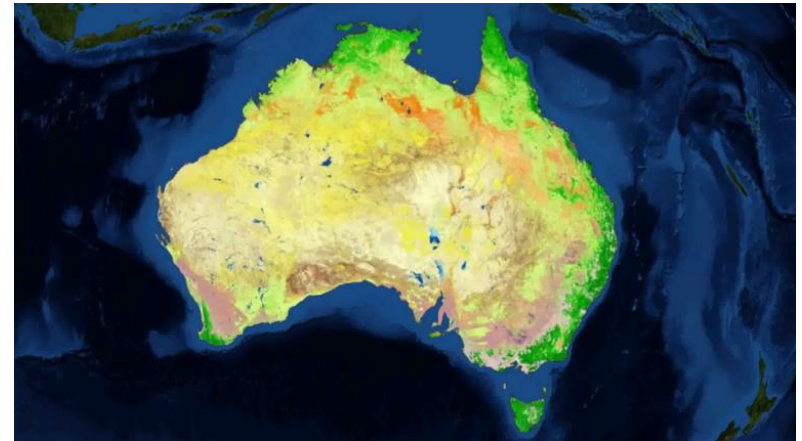
EOS Capability

Expertise

- Science for continental land cover monitoring
- Using EOS for emergency management
- Calibration/validation
- Management and delivery of large time-series EOS datasets

Data

- 2 Pb of EOS data
- Open licences where possible
- Integrated with high performance computing in the National Computational Infrastructure

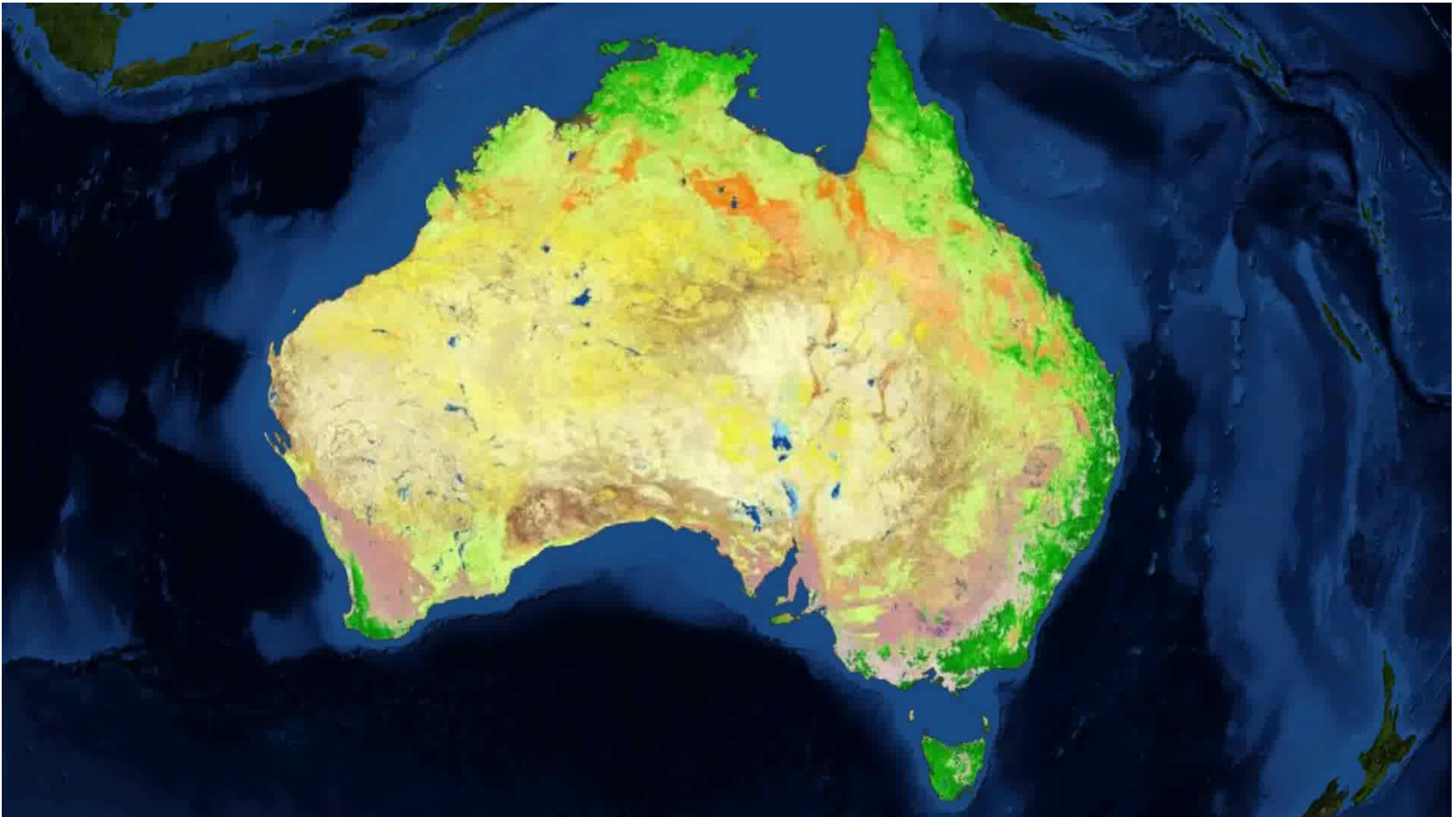


Dynamic Land Cover Map of Australia



New Petascale Raijin Computer at NCI

Land Cover dynamics



National leadership and international contribution

- One of Australia's two lead operational EOS agencies
- Driving a range of national Earth observation initiatives
- Long-term relationships with international space agencies
- Contribute data and science to the broader international community under permissive licenses
- Support calibration/validation campaigns
- Works with neighbouring nations to develop capability to leverage EOS



History of contribution to CEOS' work

GA has been engaged with CEOS since the 1990s:

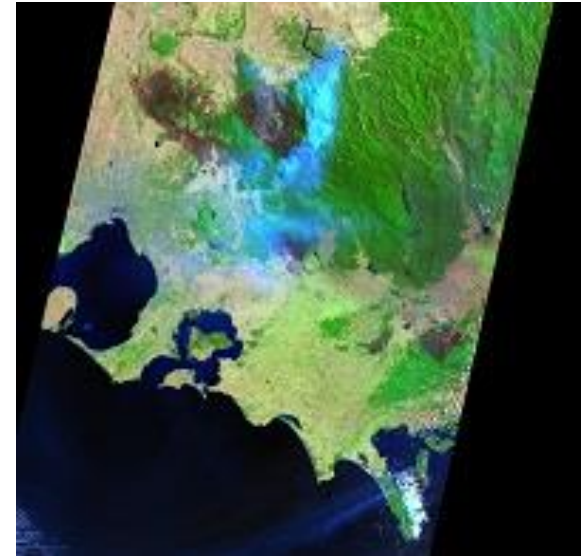
- Attendance at CEOS Plenaries and Working Group Plenaries
- Participation:
 - CEOS Strategic Implementation Team and Space Data Coordination Group meetings
 - CEOS Working Group on Calibration and Validation meetings since 2011
 - Land Surface Imaging Working Group since 2012
 - SAR Sub-Group meetings of the CEOS WGCV since 2006
 - CEOS Ad Hoc Working Group on GEOGLAM.
 - International joint campaigns for calibration and validation.



Contribution to CEOS' Goals

How can we, through Associate Membership, contribute to **CEOS Goals**?

- Facilities and area of operation position GA to support the goal to **close observational gaps**
- Policy of making data and products freely available supports the goal of **improving Data Democracy**
- Role as an operational EOS agency enables GA to provide perspectives that can support **responsiveness to global Earth observation needs**
- Experience in operating sea and ground-based observatories positions GA to support the goal of **integrating Earth observations**



Emergency Management



National Seismic Network Observatory

Potential future contribution

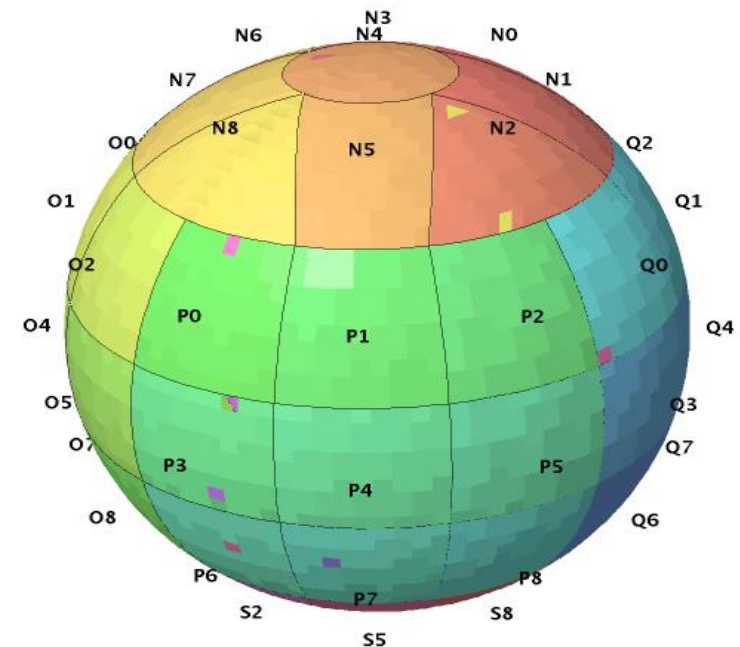
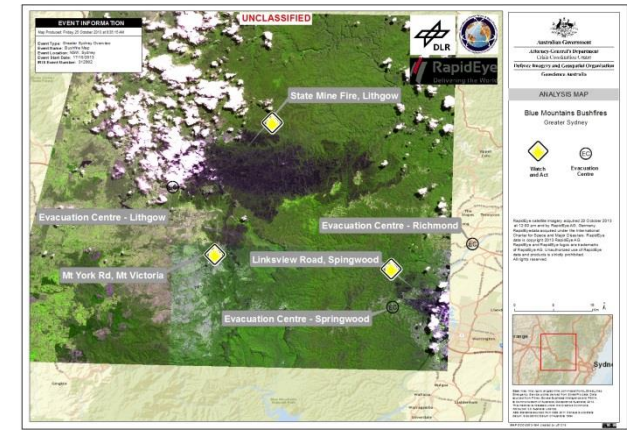
GA hopes to increase its contribution to CEOS by:

- Providing in-kind and financial support to the Australian Chairmanship in 2016
- Providing in-kind support for targeted projects/activities in working groups:
 - Data Democracy
 - Calibration/Validation
 - Information Management
- Working with other Australian Government agencies to encourage support for CEOS objectives and activities
- Continuing to participate in relevant CEOS Working Groups where GA is able to make effective contributions

Contribution on high-performance data infrastructure

A sustained Australian approach to EOS

- Increasing Australia's understanding of our dependence on satellites and the investments we can make to sustain those capabilities and services
- Big data – Data-cubes, the application of big data, and the ultimate vision of the Digital Earth
- Earth observation for community safety; timely, relevant, standardised information



Summary

- Geoscience Australia (GA) has been engaged with CEOS since the 1990s. GA works closely with CSIRO and the Bureau of Meteorology
- Geoscience Australia has relevant capabilities, and can help to progress the CEOS goals
- Geoscience Australia undertakes significant ground segment activity
- Geoscience Australia's geographical area of operations positions it to provide a unique offering
- Geoscience Australia is increasing its involvement in CEOS, GEO, etc, where we have specific strengths

Geoscience Australia thanks the CEOS Plenary for taking the time to consider its application for Associate Membership



Australian Government
Geoscience Australia



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