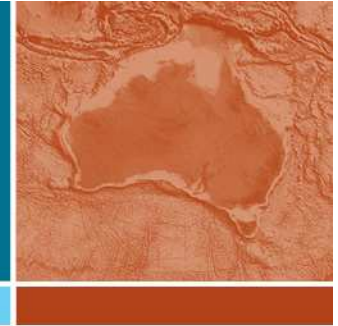




Australian Government
Geoscience Australia

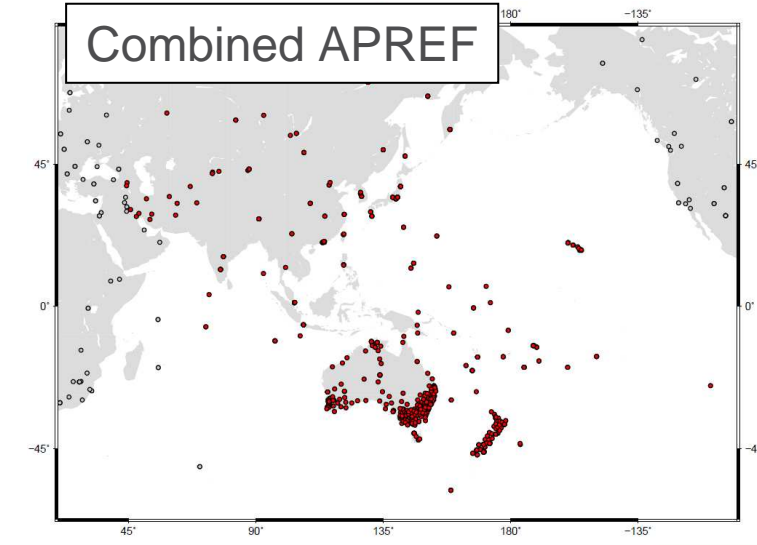
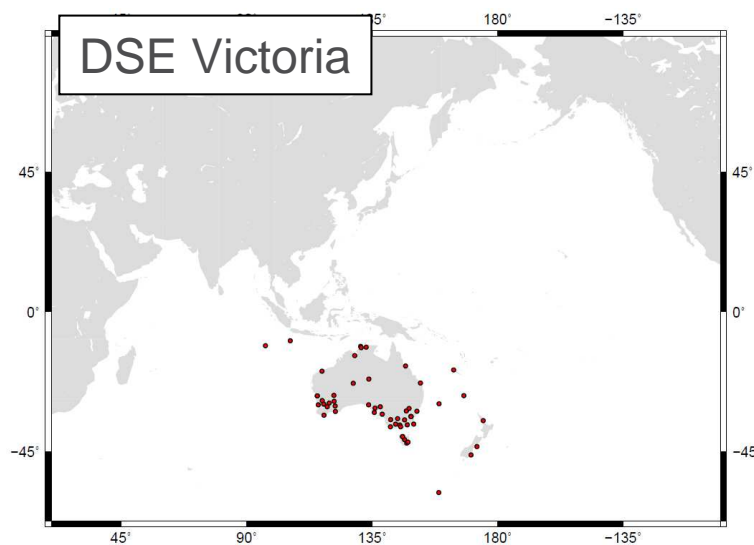
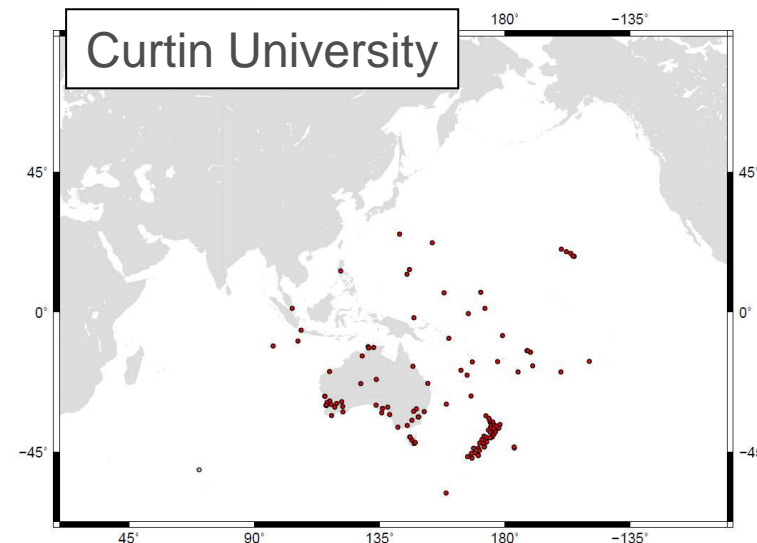
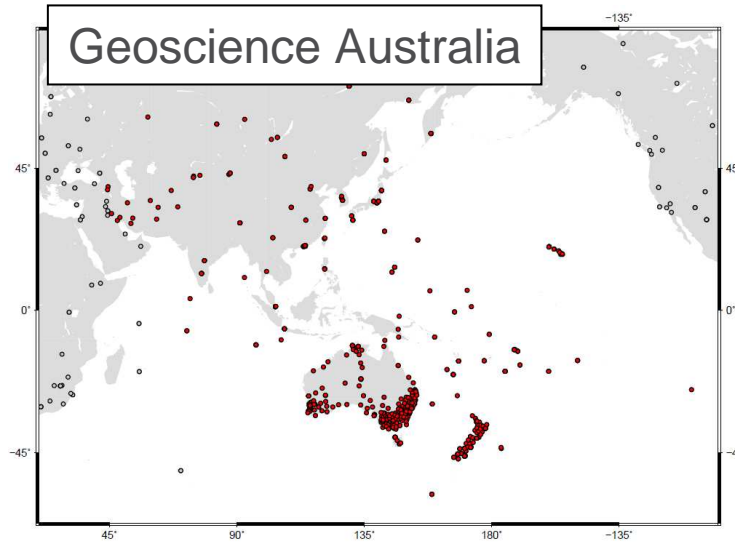


Asia Pacific Reference Frame (APREF)

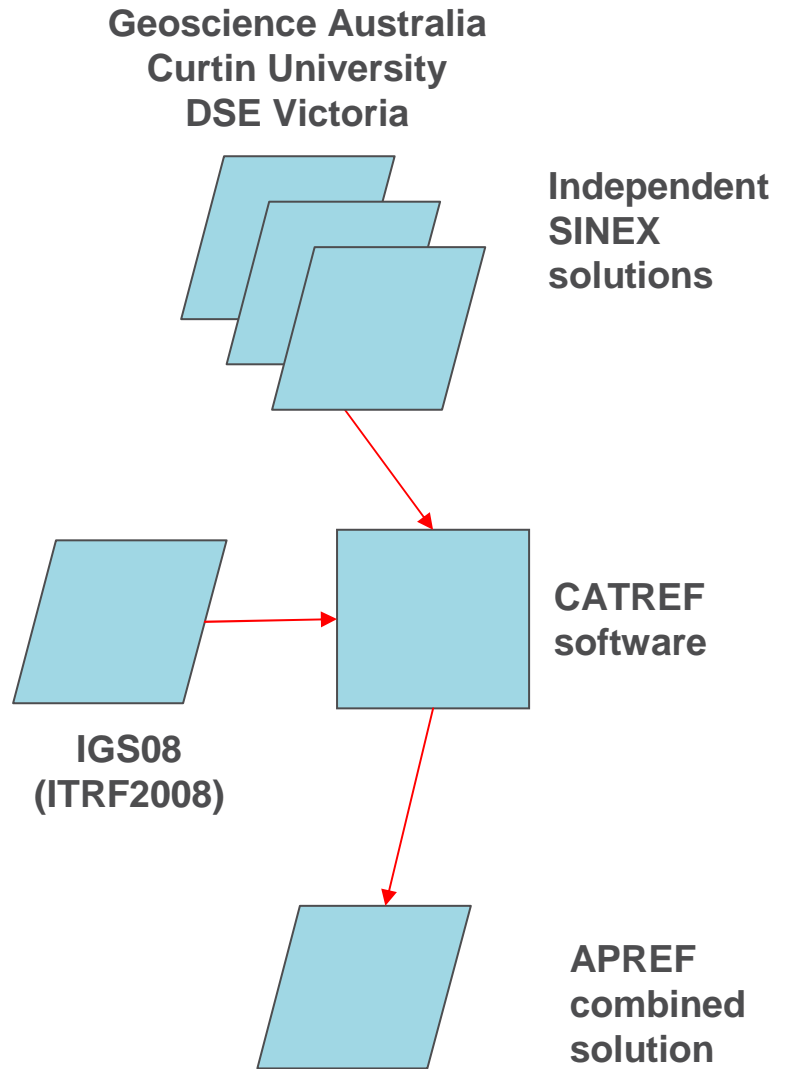
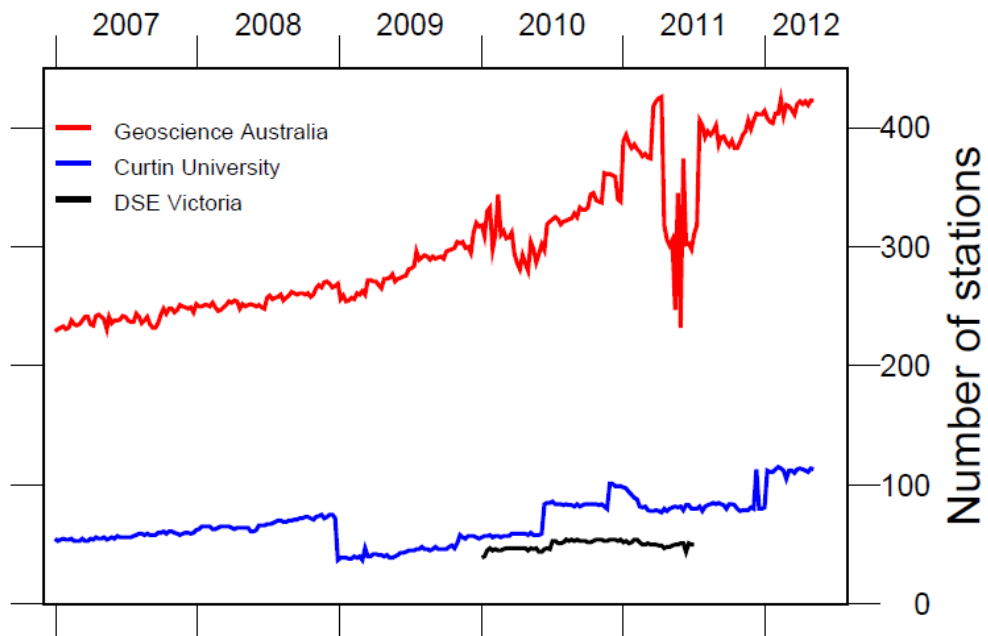
APREF Background

- Joint project of IAG and PCGIAP
- Focused on reference densification using GPS
- 33 Countries
- Collaborative and self funded
- 3 analysis centres
- 500 stations

Contributing Solutions



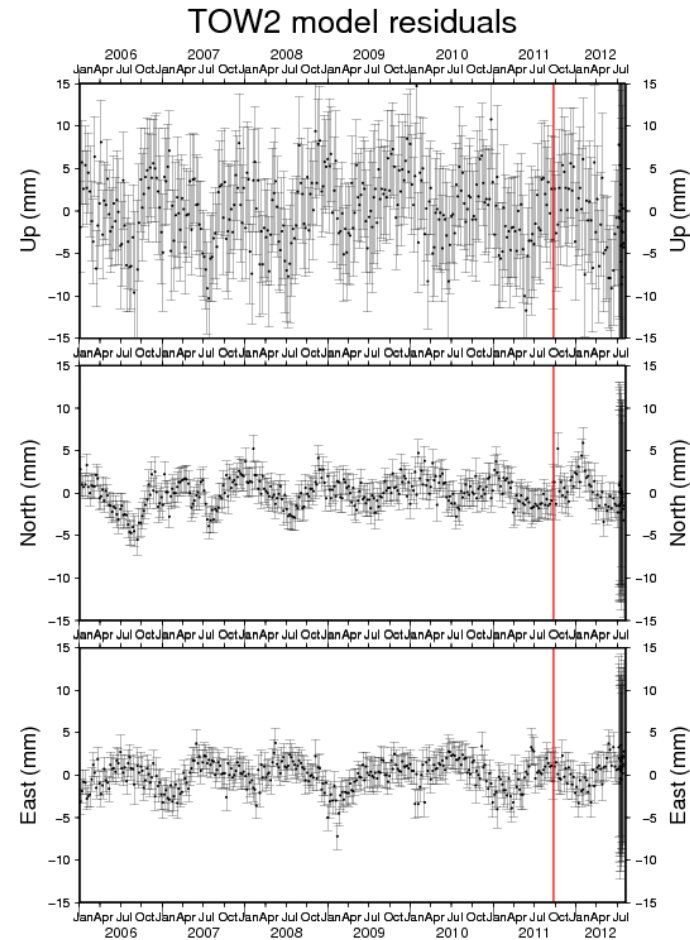
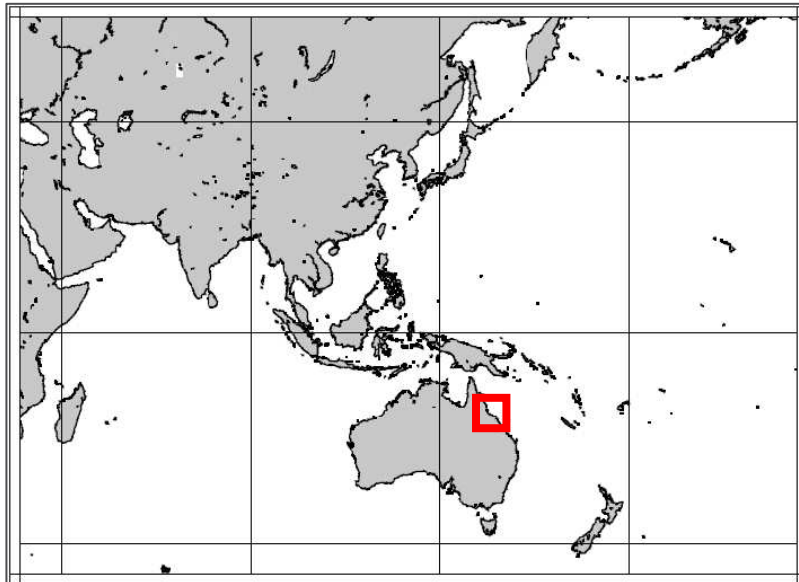
Contributing Solutions and Combination



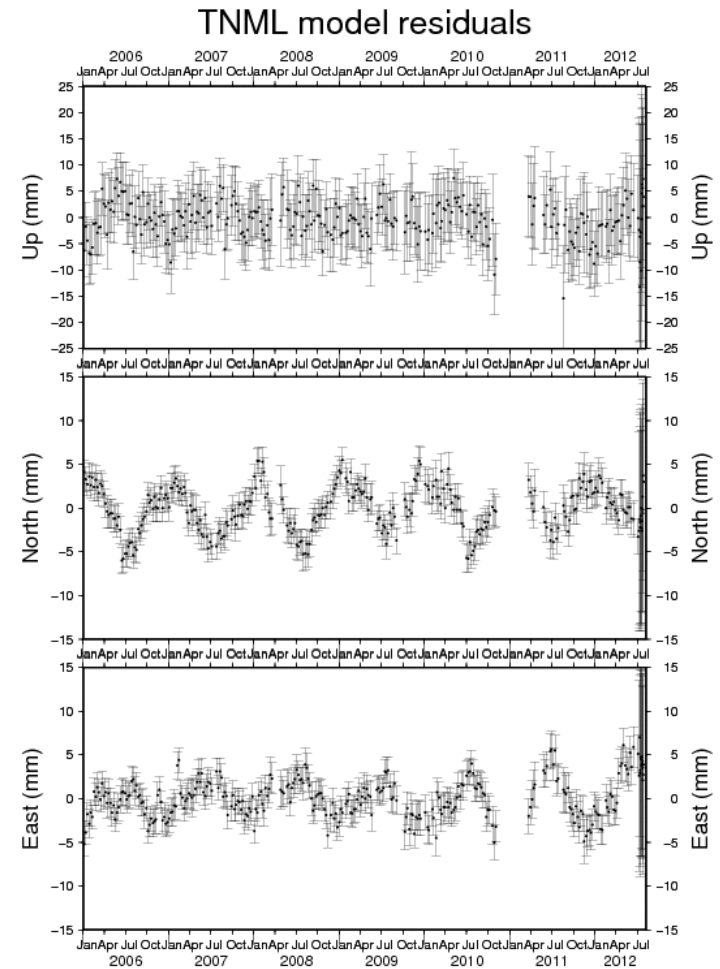
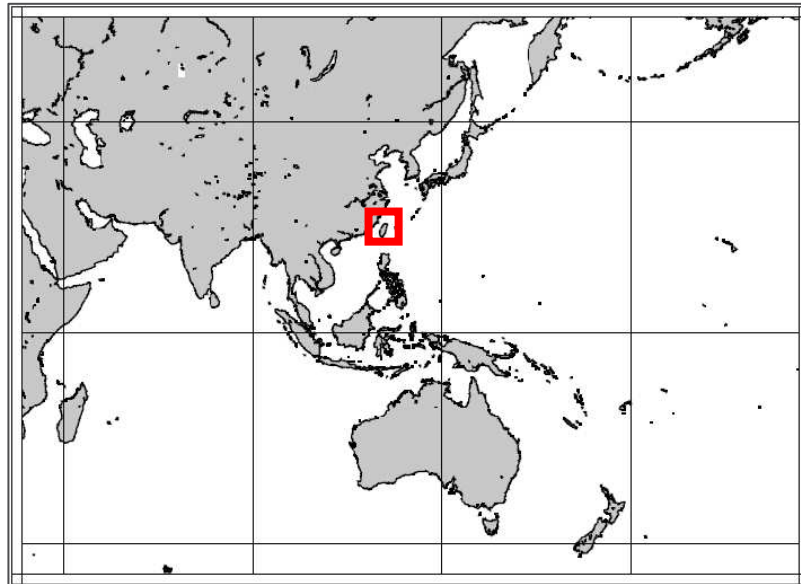
Solution Quality – Internal Consistency

Mean Weighted RMS with respect to the Combined Solution			
Solution	North (mm)	East (mm)	Up (mm)
Geoscience Australia	0.1	0.1	0.3
Curtin University	1.1	1.2	3.2
DSE Victoria	0.7	1.0	3.0

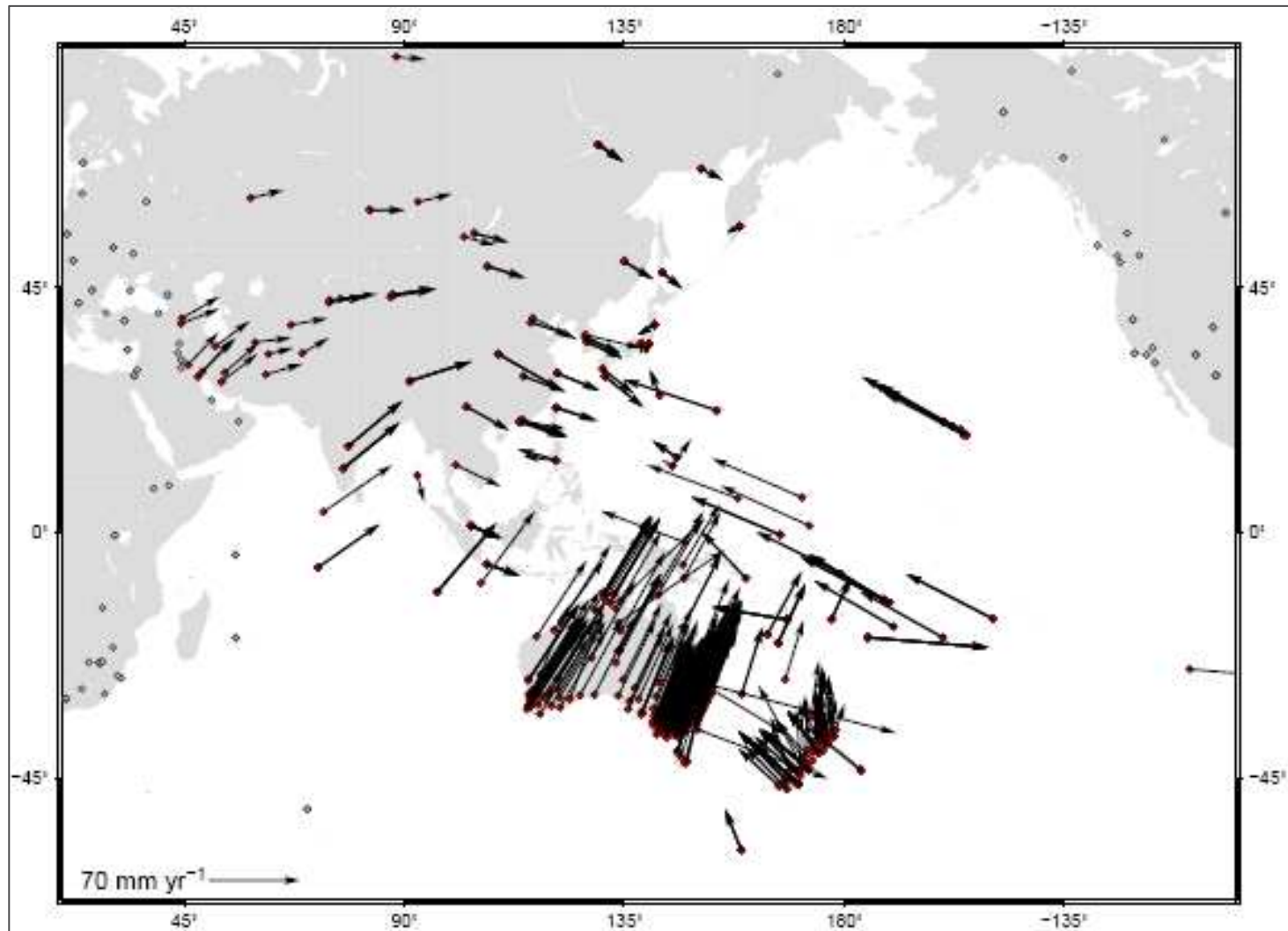
Example Coordinate Time Series: Townsville



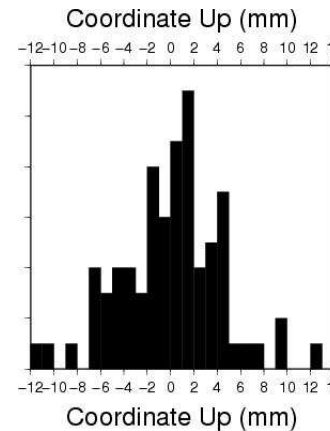
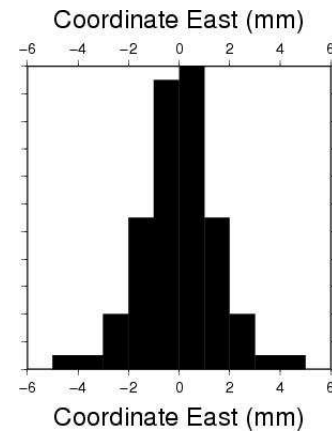
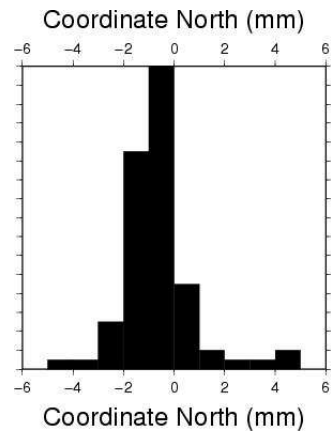
Example Coordinate Time Series: Hsinchu, Taiwan



APREF Crustal Velocity Field



Histograms of Differences APREF → IGS08

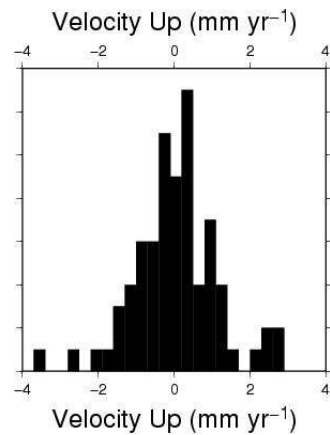
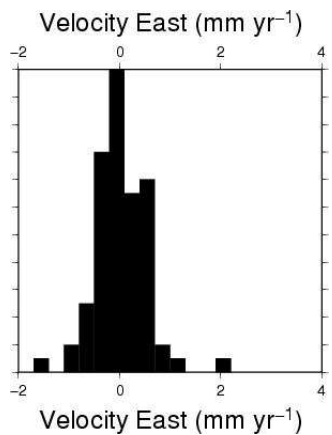
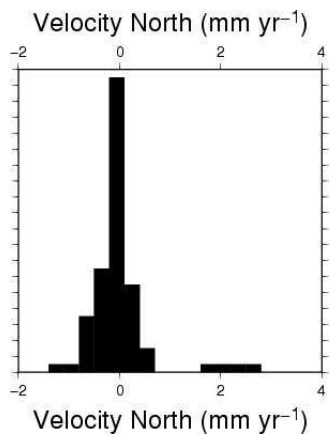


77 Common Stations

RMS Coordinate
Differences

1.5, 1.5, 4.4 mm

(E, N, U)



RMS Velocity

Differences

0.6, 0.5, 1.1 mm yr⁻¹

(E, N, U)

Accessing APREF Information and Products

www.ga.gov.au/earth-monitoring/geodesy/asia-pacific-reference-frame.html

Australian Government
Geoscience Australia

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Earth Monitoring and Reference Systems

Home > Earth Monitoring and Reference Systems > Geodesy and Global Navigation Systems > Asia-Pacific Reference Frame

Asia-Pacific Reference Frame (APREF)

- Background of APREF
- Objectives of APREF
- APREF organisational structure
- Participating agencies
- Data and products
- How can I participate in APREF?
- Station and data standards
- Analysis standards
- APREF mandate

The purpose of the Asia-Pacific Reference Frame (APREF) project is to create and maintain an accurate geodetic framework to meet the growing needs of industries, science programs and the general public using positioning applications in the Asia-Pacific region.

Background of APREF

The use of positioning technology is growing rapidly in industries such as mining, agriculture and construction. Furthermore, in recent years, there has been an increasing demand from emergency services, hazard modellers, and land, utility and asset managers. The applications of these users have a demonstrated need for centimetre level or better geodetic infrastructure. In order to provide this, the Asia-Pacific region needs a consistent, continually refined and easily accessible reference frame.

In the Asia-Pacific region there are a substantial number of state-of-the-art Global Navigation Satellite System (GNSS) networks, which are commonly

PRODUCTS

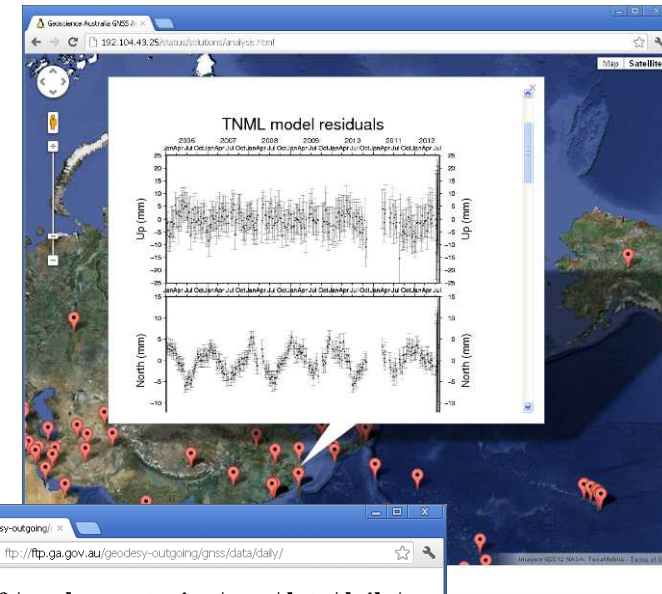
SEARCH ALL PRODUCTS

- Maps [More]
- Data/Applications [More]
- Publications [More]
- Guidelines for APREF Station Operators [PDF 365KB]
- Multimedia [More]

RELATED WEBSITES

- International Association of Geodesy (IAG)
- Permanent Committee on GIS Infrastructure for Asia and the Pacific (PCGIAP)
- International GNSS Service (IGS)
- International Earth Rotation and Reference Systems Service (IERS)

Subscribe

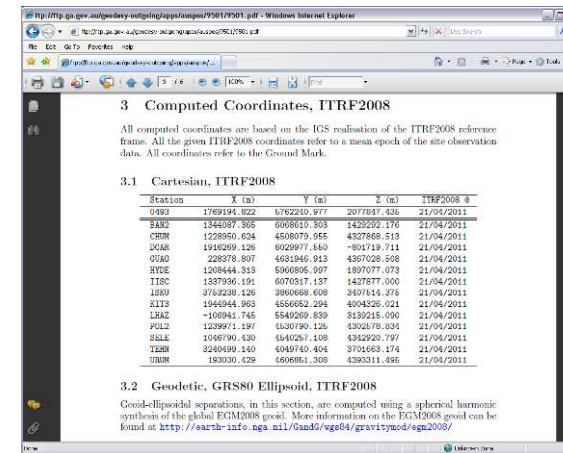
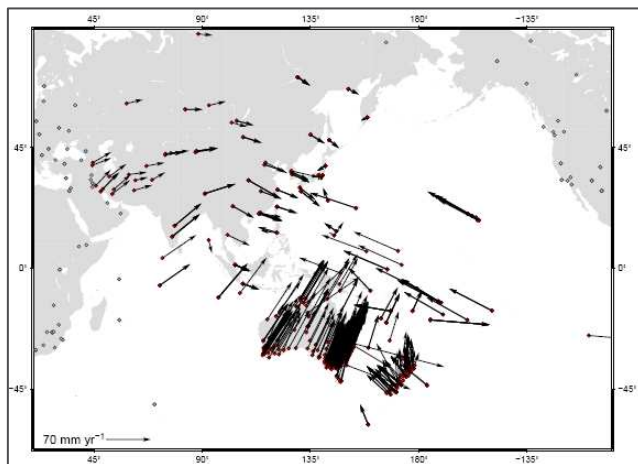
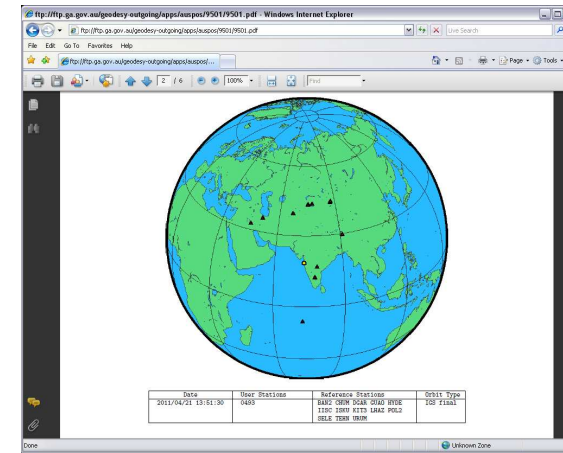
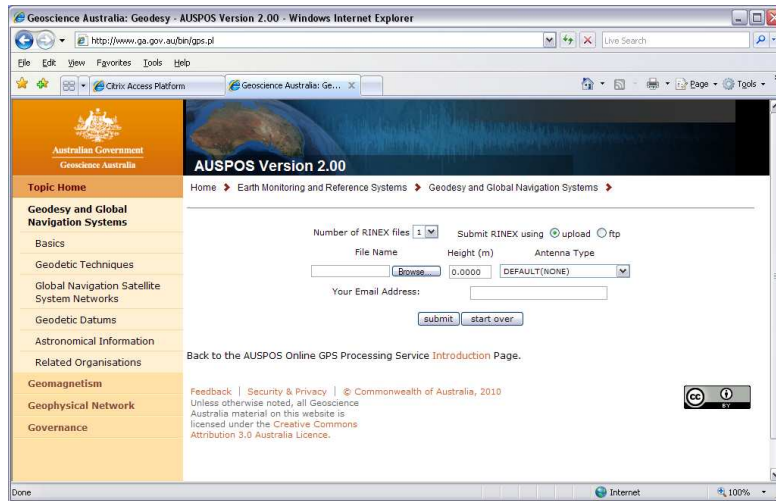


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2011/		12/31/11 12:00:00 AM
2012/		8/10/12 1:01:00 AM

Example Applications Using APREF Products

AUSPOS - Geoscience Australia's Online GPS Processing Tool



Challenges

Institutional

→ Meeting?

Participation