Australian Government
Geoscience Australia

Asia Pacific Reference Frame (APREF)

APREF Background

→ Joint project of IAG and PCGIAP

→ Focused on reference densification using GPS

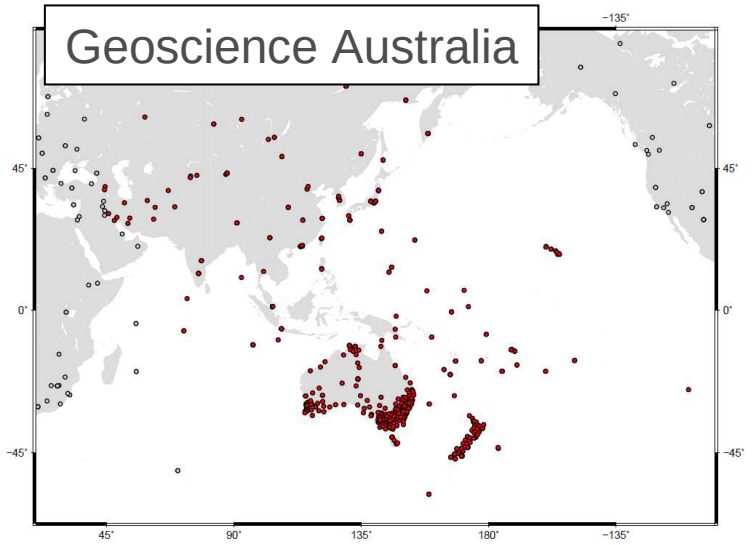
→ 33 Countries

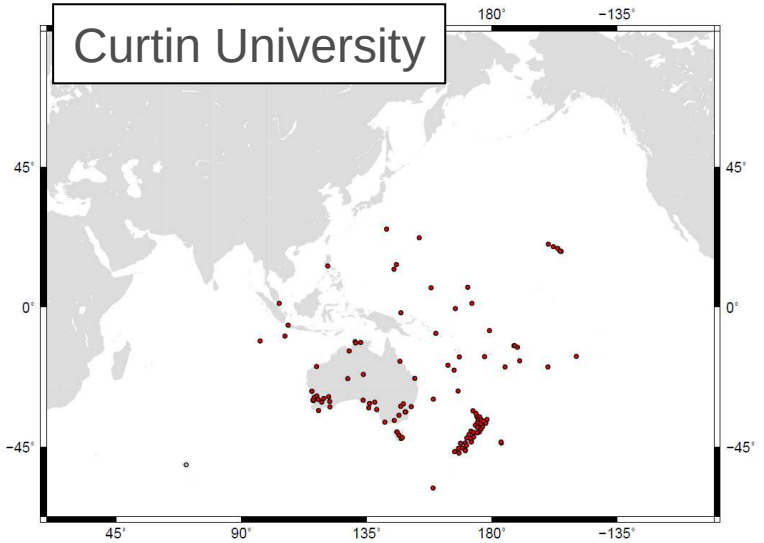
→ Collaborative and self funded

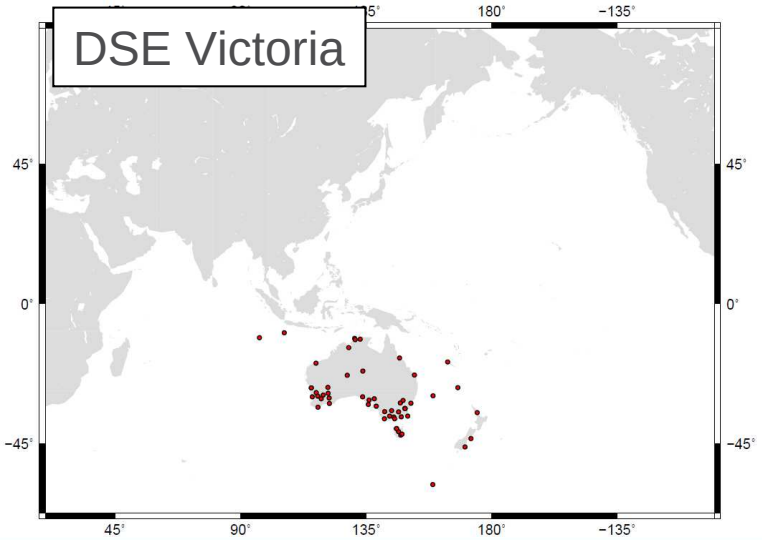
→ 3 analysis centres

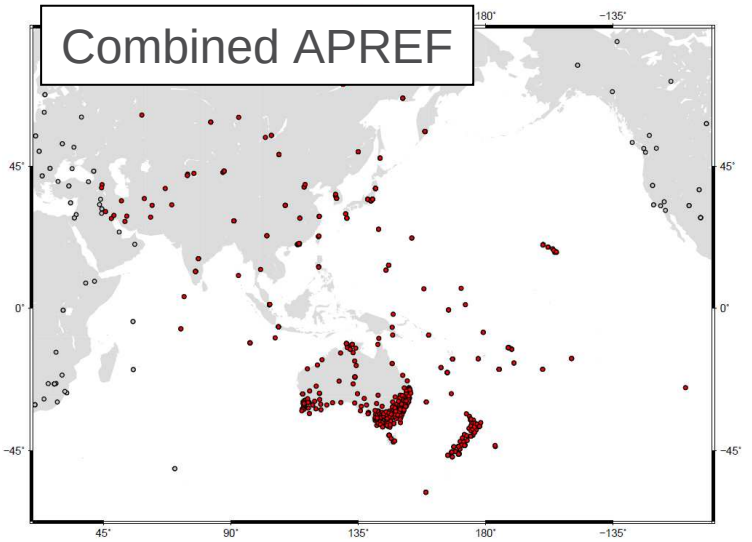
→ 500 stations

Contributing Solutions

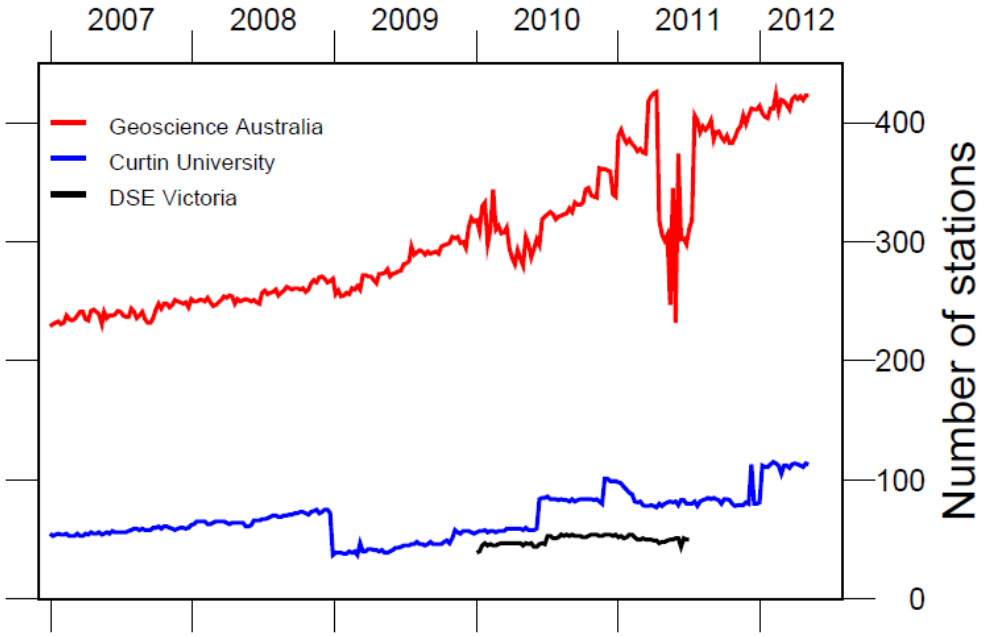


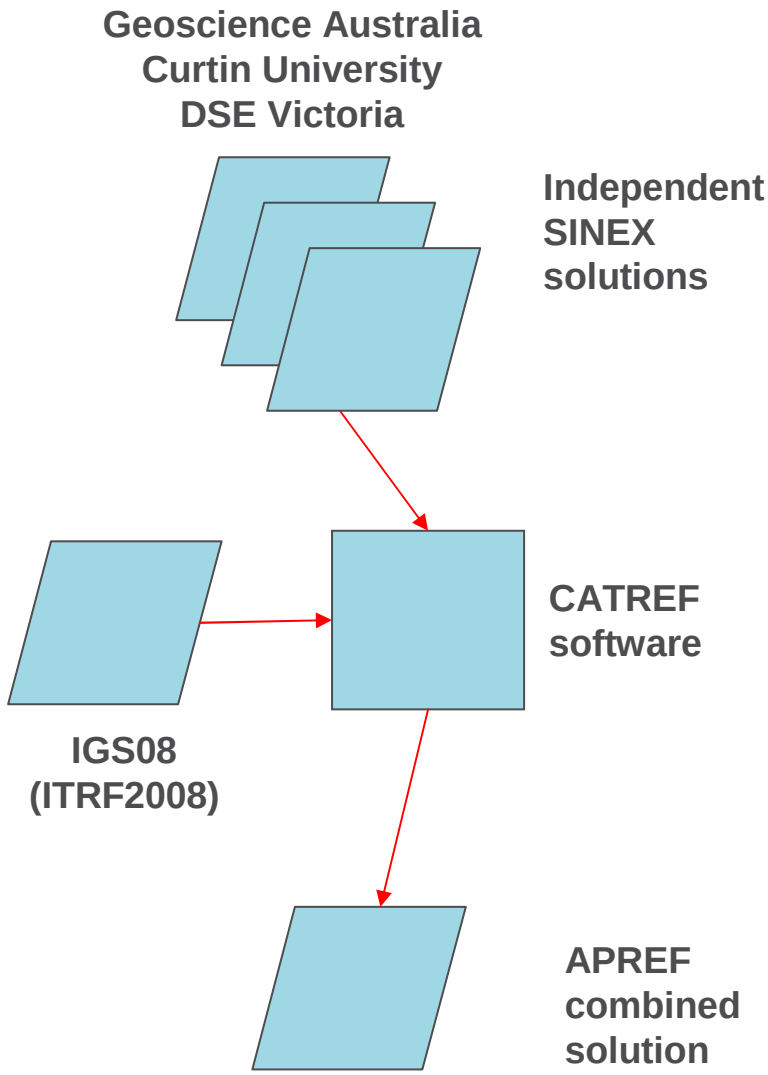






Contributing Solutions and Combination

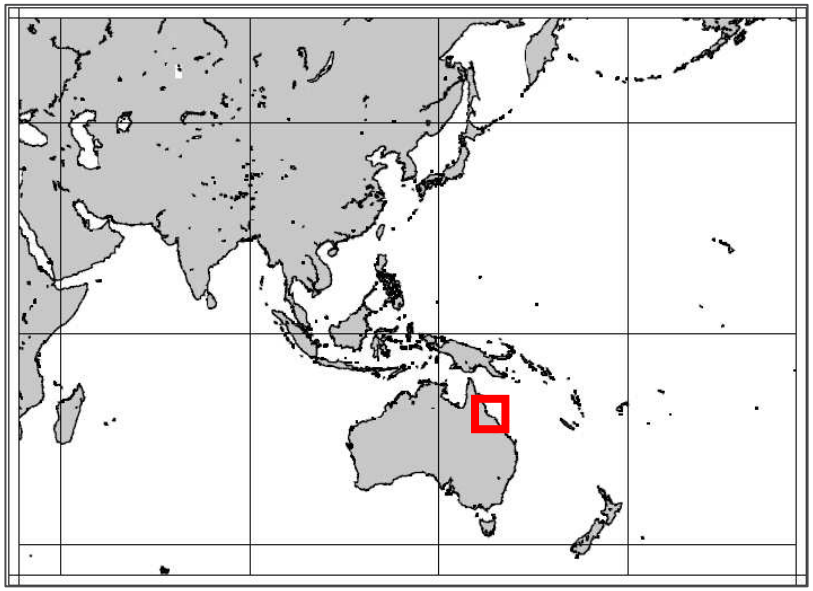


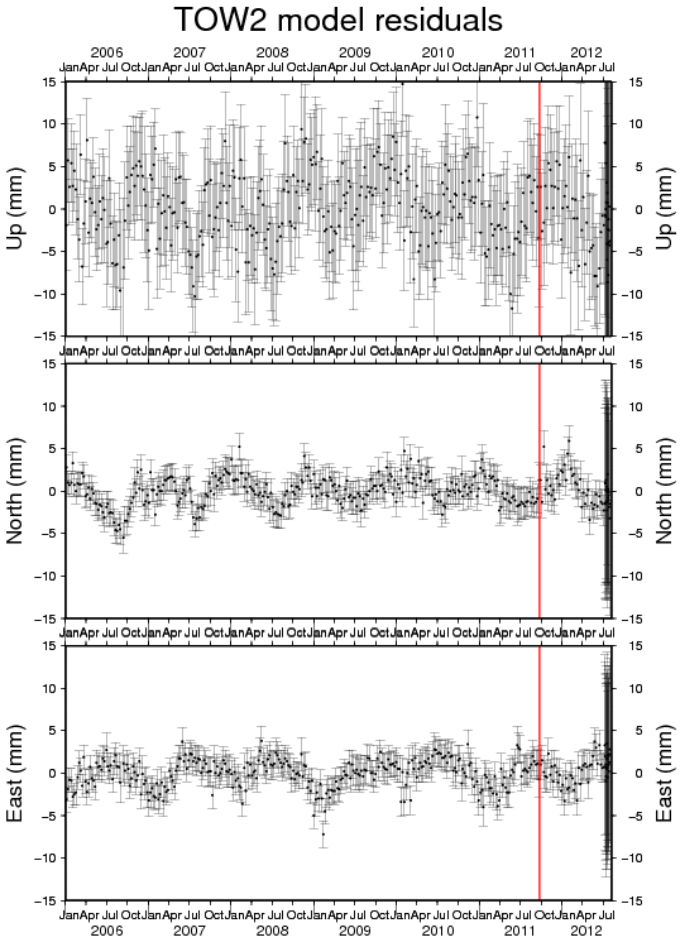


Solution Quality – Internal Consistency

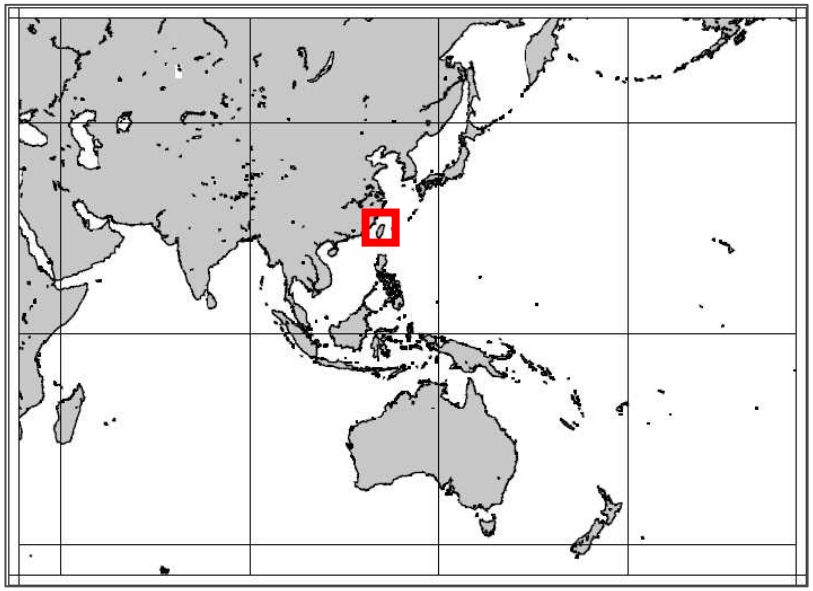
Mean Weighted RMS with respect to the Combined Solution			
Solution	**North (mm)**	**East (mm)**	**Up (mm)**
Geoscience Australia	0.1	0.1	0.3
Curtin University	1.1	1.2	3.2
DSE Victoria	0.7	1.0	3.0

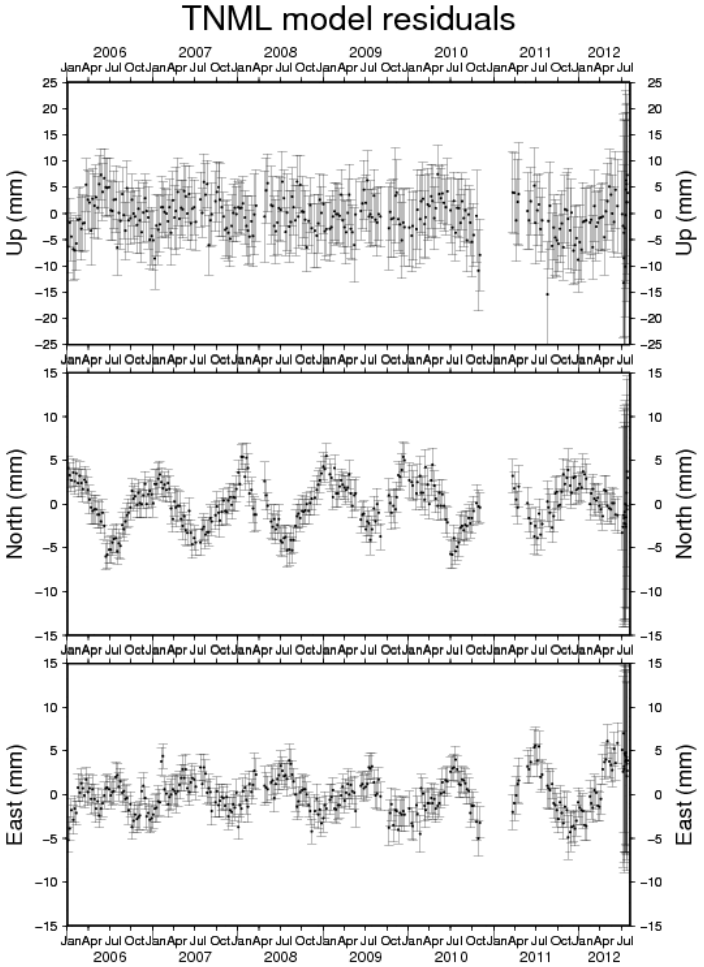
Example Coordinate Time Series: Townsville



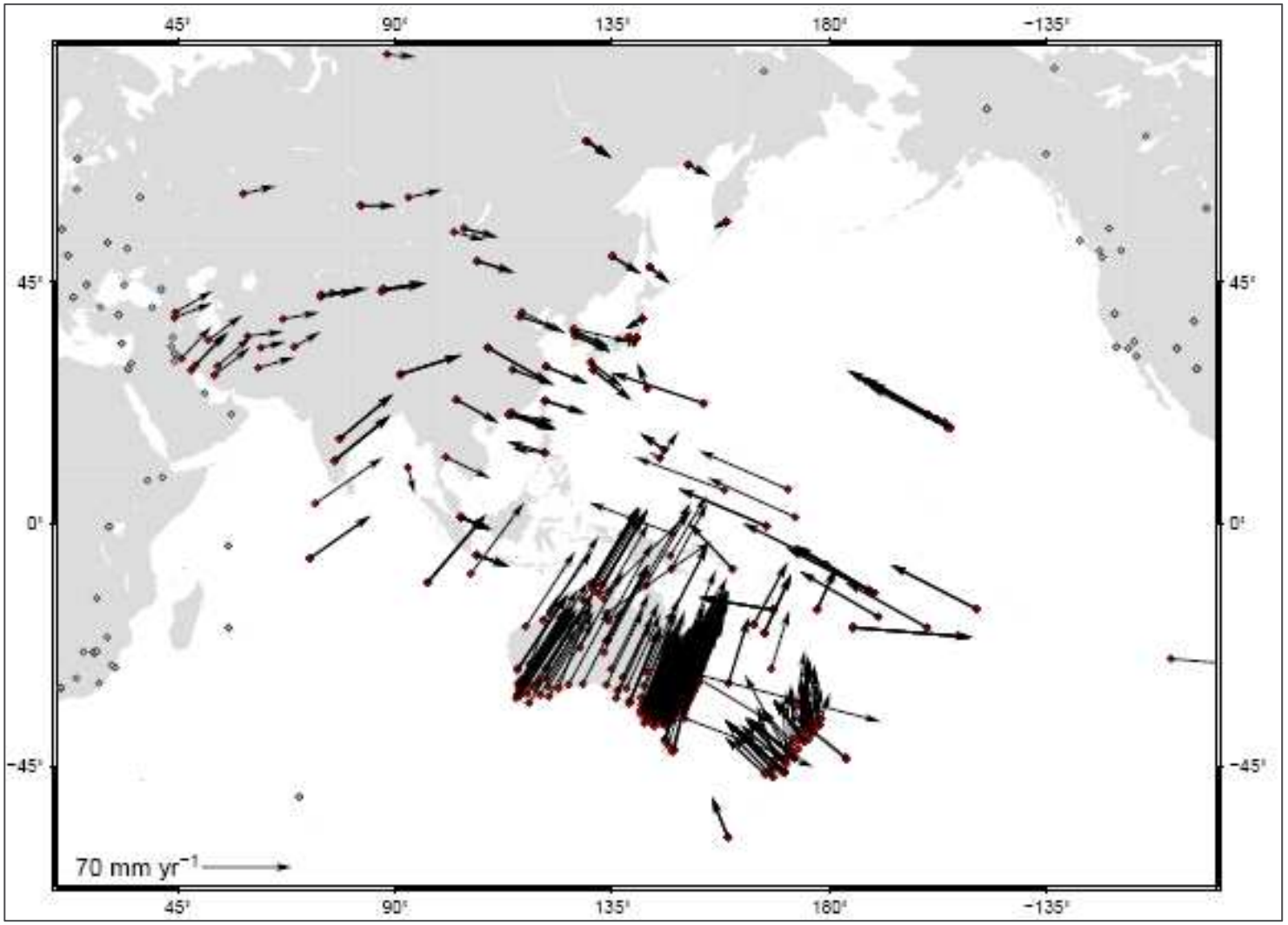


Example Coordinate Time Series: Hsinchu, Taiwan

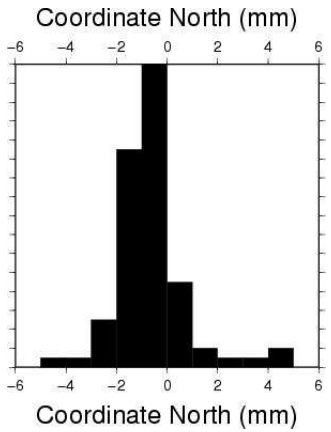


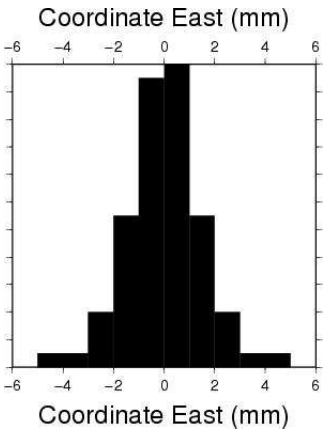


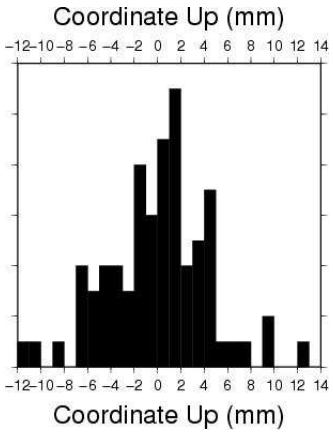
APREF Crustal Velocity Field



Histograms of Differences APREF → IGS08





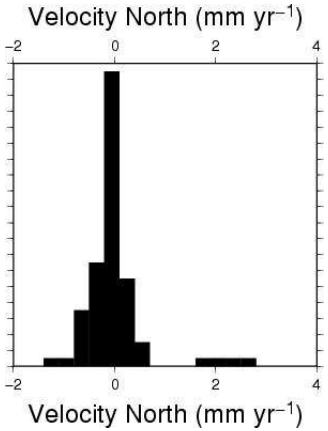


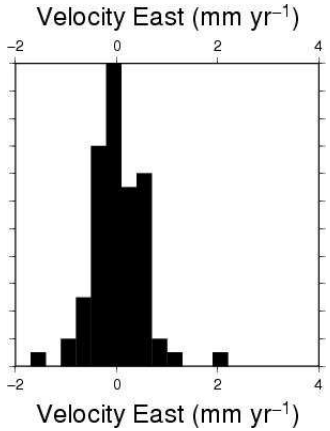
77 Common Stations

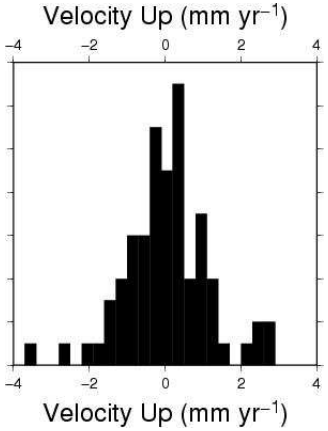
RMS Coordinate Differences

1.5, 1.5, 4.4 mm

(E, N, U)





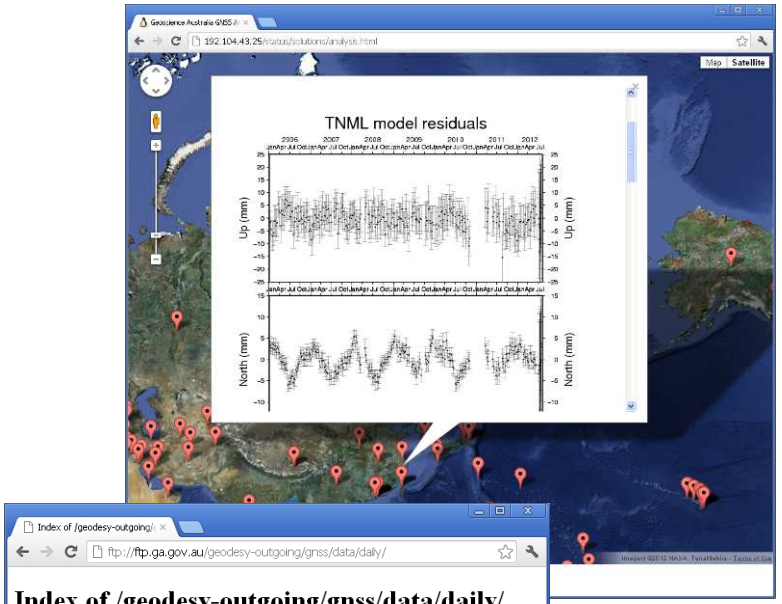


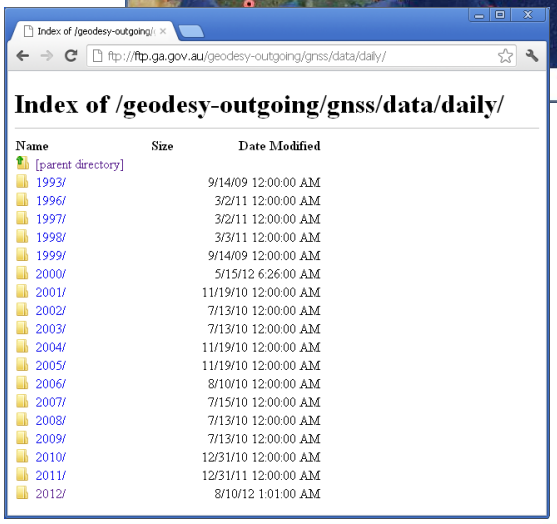
RMS Velocity Differences

0.6, 0.5, 1.1 mm yr^{-1}

(E, N, U)

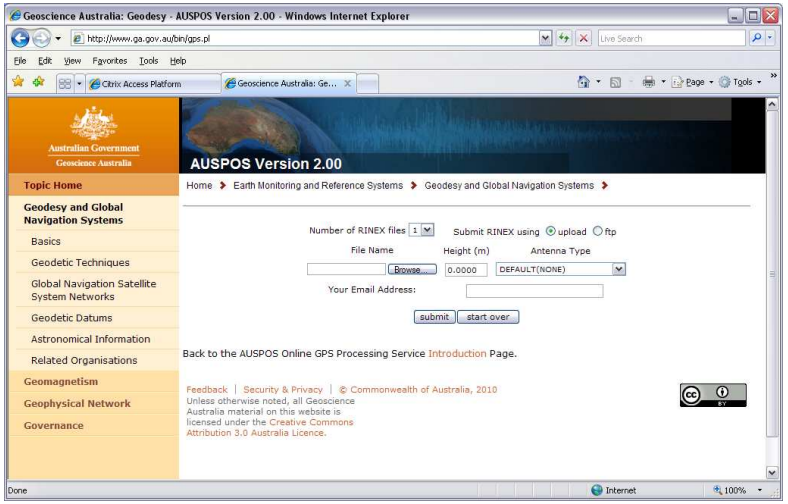
Accessing APREF Information and Products

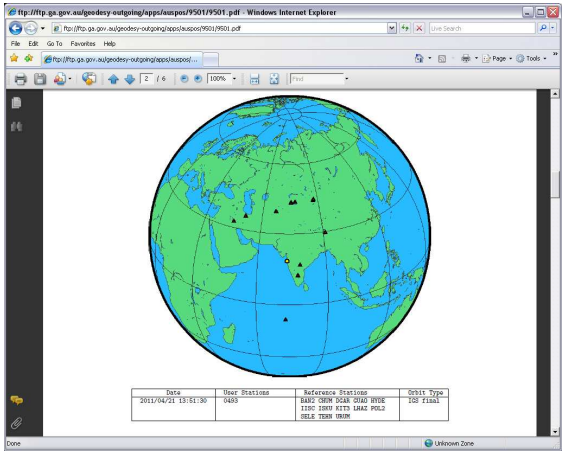


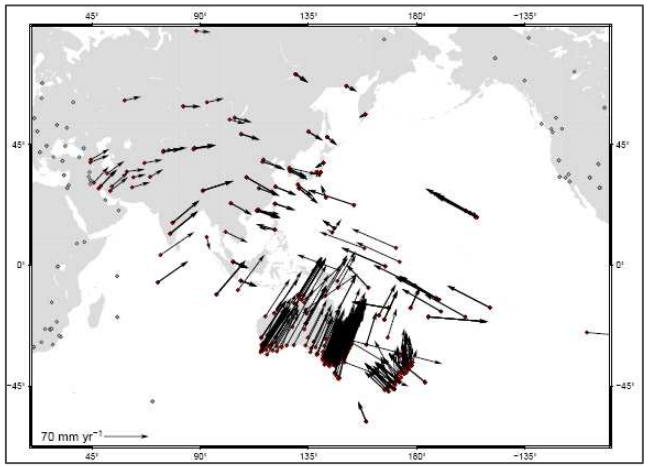


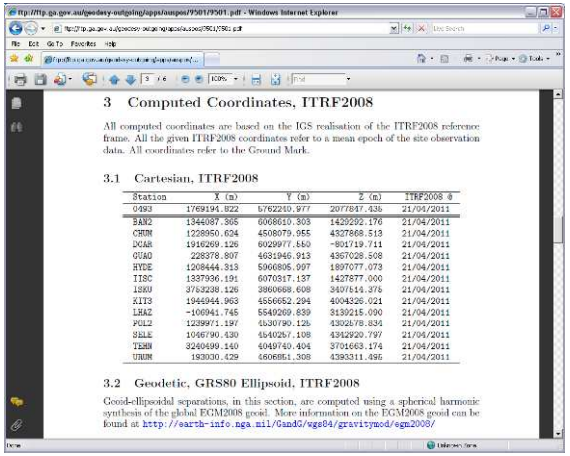
Example Applications Using APREF Products

AUSPOS - Geoscience Australia's Online GPS Processing Tool









Challenges

Institutional

→Meeting?

Participation