Australian Government

Geoscience Australia

South Pacific Sea Level and Climate Monitoring GPS Coordinate Time Series

National Geospatial Reference Systems Project

Geospatial & Earth Monitoring Division, Geoscience Australia

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Note of Caution:

It is important to note that the length of the time series is too short for reliable vertical station velocity estimation. As the data collection and the height time series becomes longer, and the strategy of simultaneous estimation of velocities and periodical or seasonal signals is used, the estimates of the vertical crustal motion will become more accurate and reliable.

Contents

1 General Notes

I. This combined SPSLCMP GPS solution has been aligned to International Terrestrial Reference Frame 2000 (ITRF2000) using the latest available International GPS Service (IGS) combined cumulative solution.

II. Error bars are 1 sigma. All variance-covariance has been re-scaled to better reflect actual precision.

III. Each solution ’circle’ represents a weekly combined solution. Outliers are not shown on plots.

2..Time Series

2.1 Cook Islands

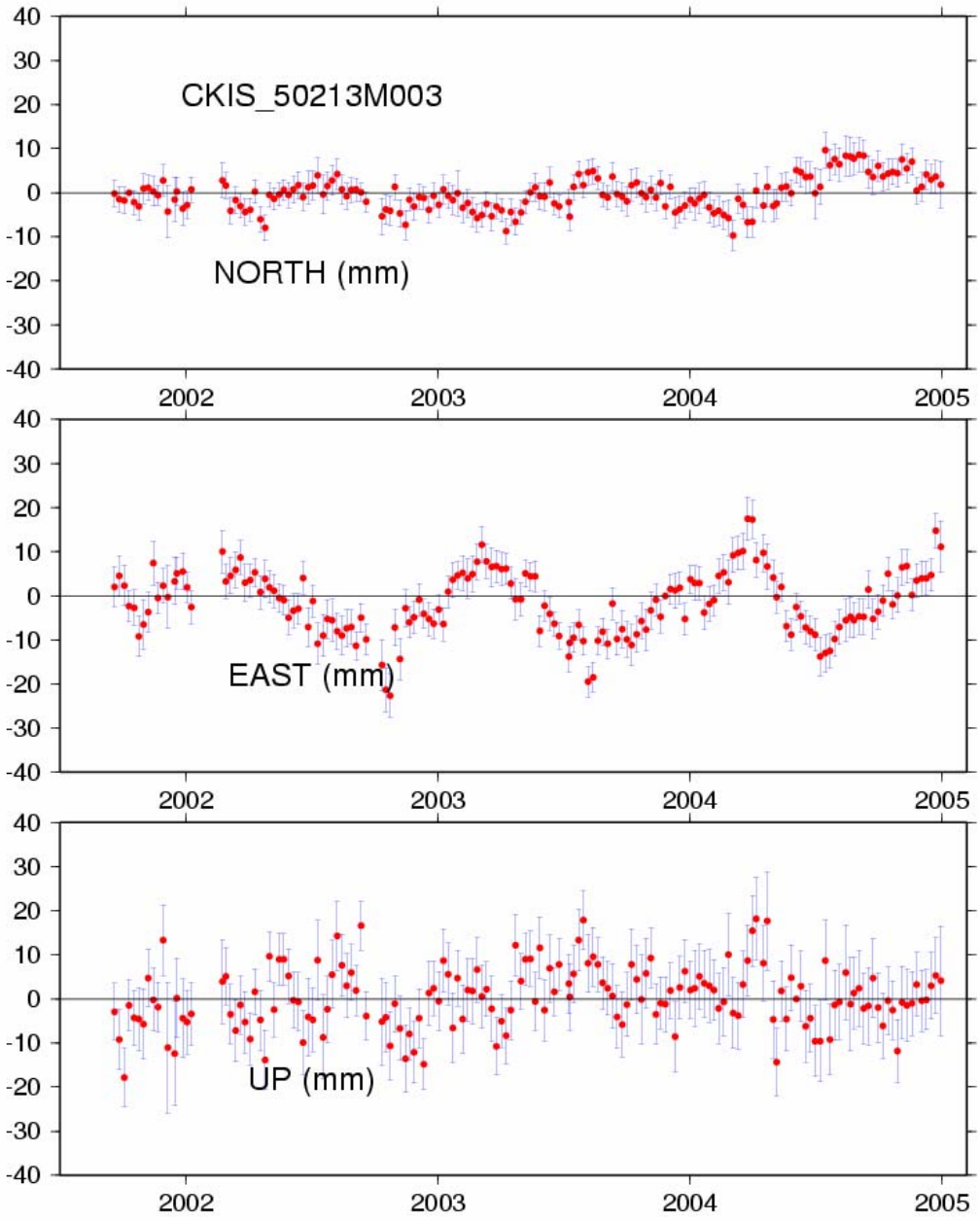

Figure 1 – De-trended Time Series Plot – Cook Islands
Trend in Height Component –2.1 mm/yr with an Uncertainty 0.6 mm/yr

2.2 Fiji (LAUT)

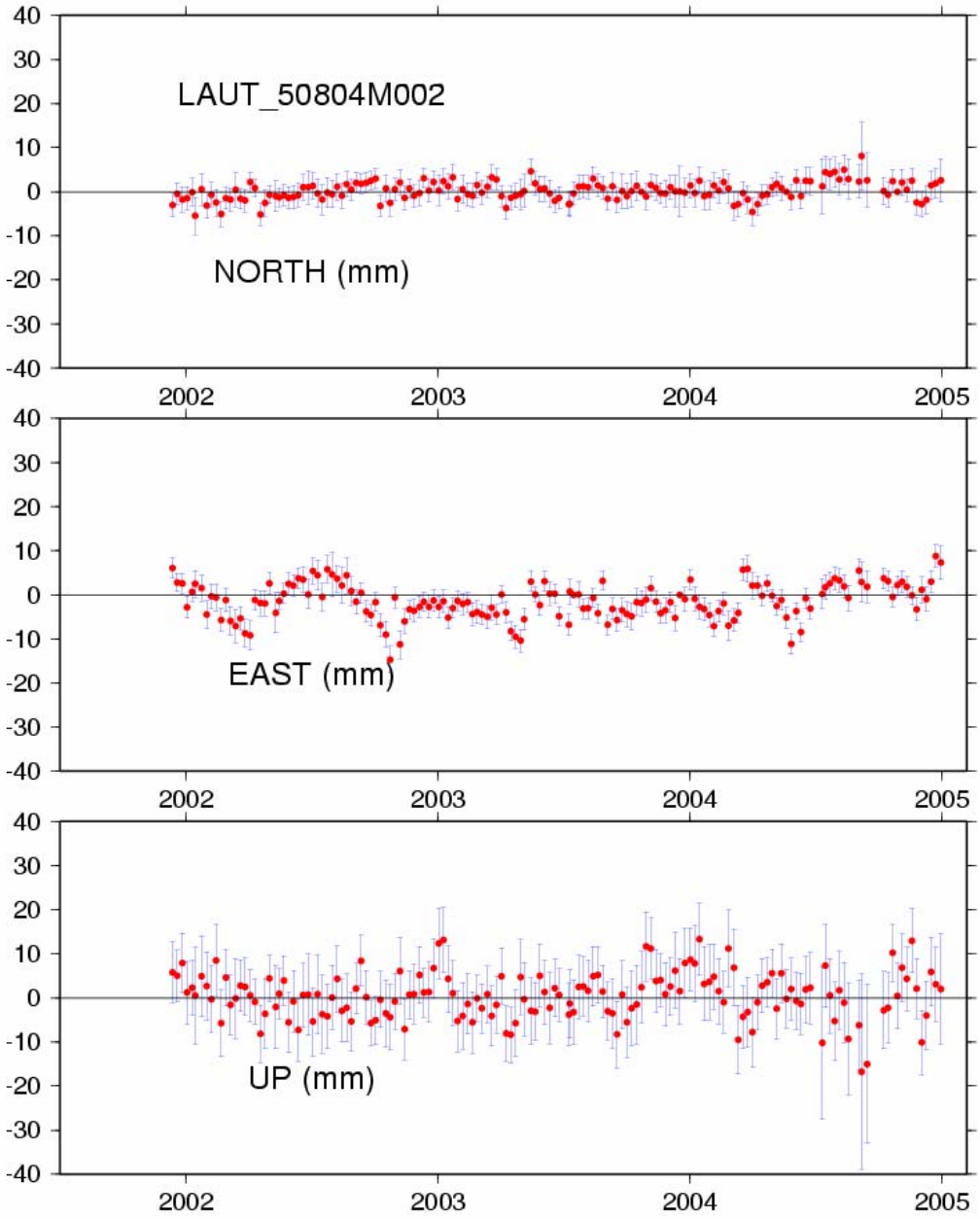

Figure 2 – De-trended Time Series Plot – Fiji
Trend in Height Component 2.9 mm/yr with an Uncertainty 0.7 mm/yr

2.3 Kiribati

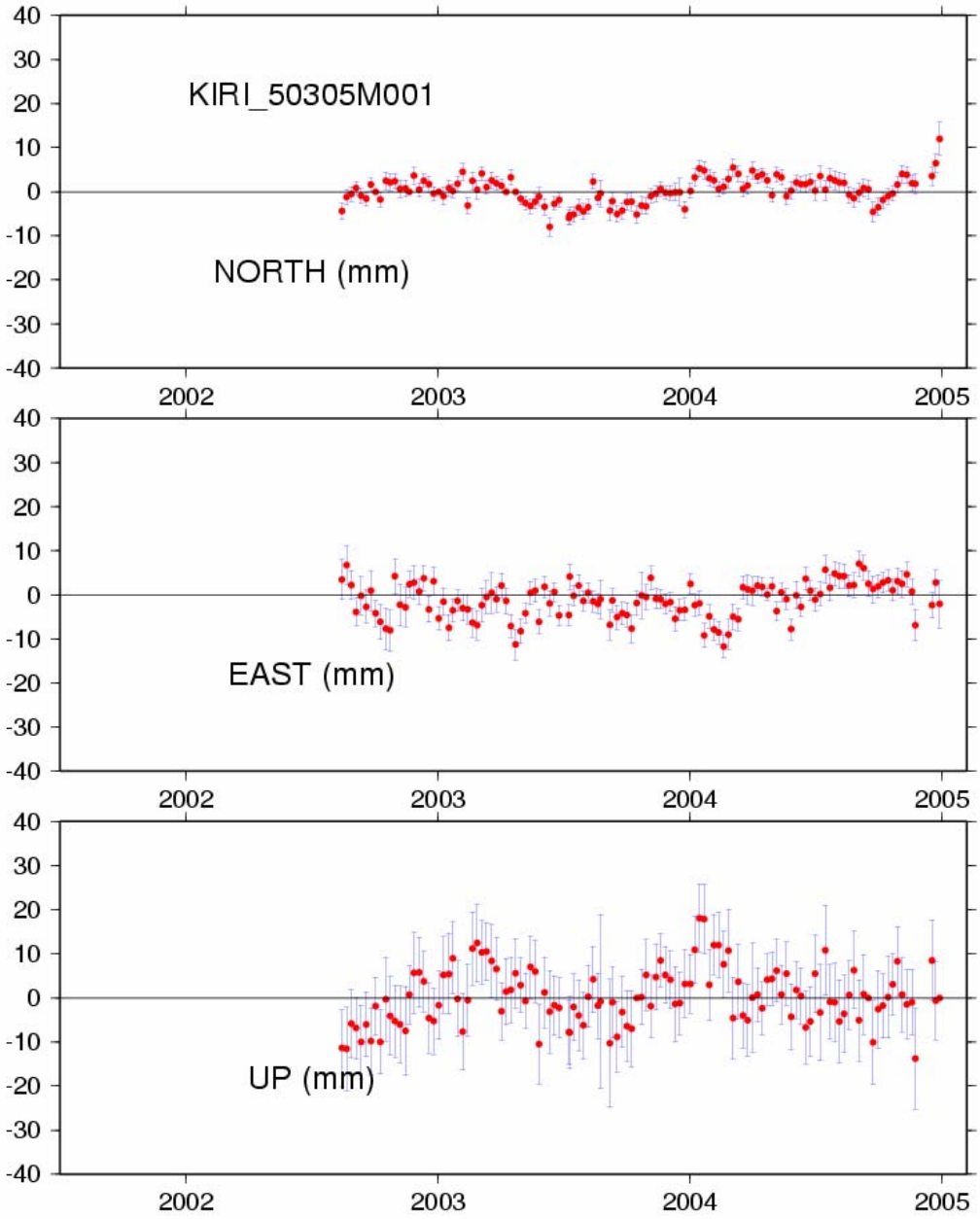

Figure 3 – De-trended Time Series Plot – Kiribati
Trend in Height Component 0.0 mm/yr with an Uncertainty 1.1 mm/yr

2.4 Manus Island (PNG)

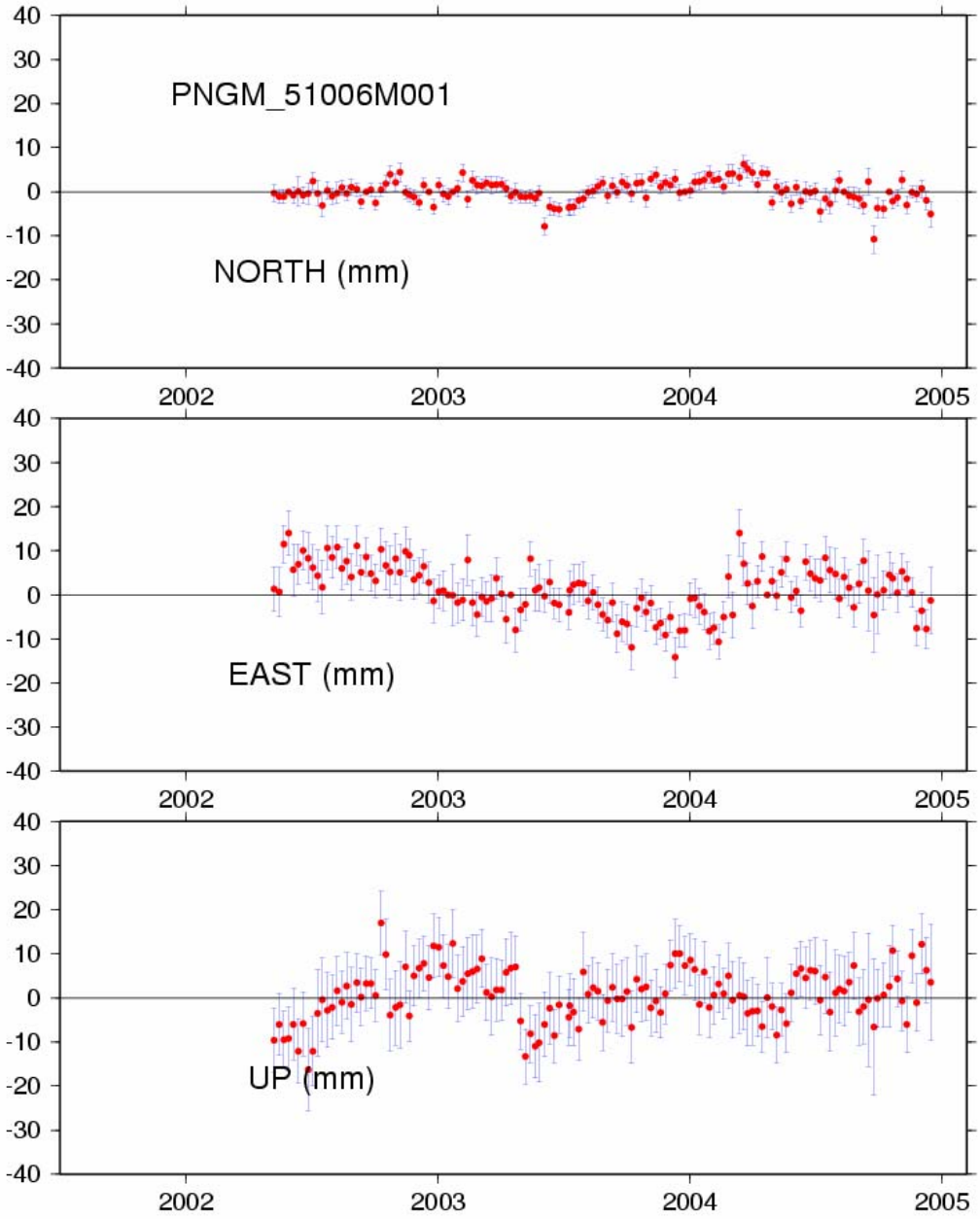

Figure 4 – De-trended Time Series Plot – Manus Island
Trend in Height Component 5.3 mm/yr with an Uncertainty 0.9 mm/yr

2.5 Micronesia (PHON)

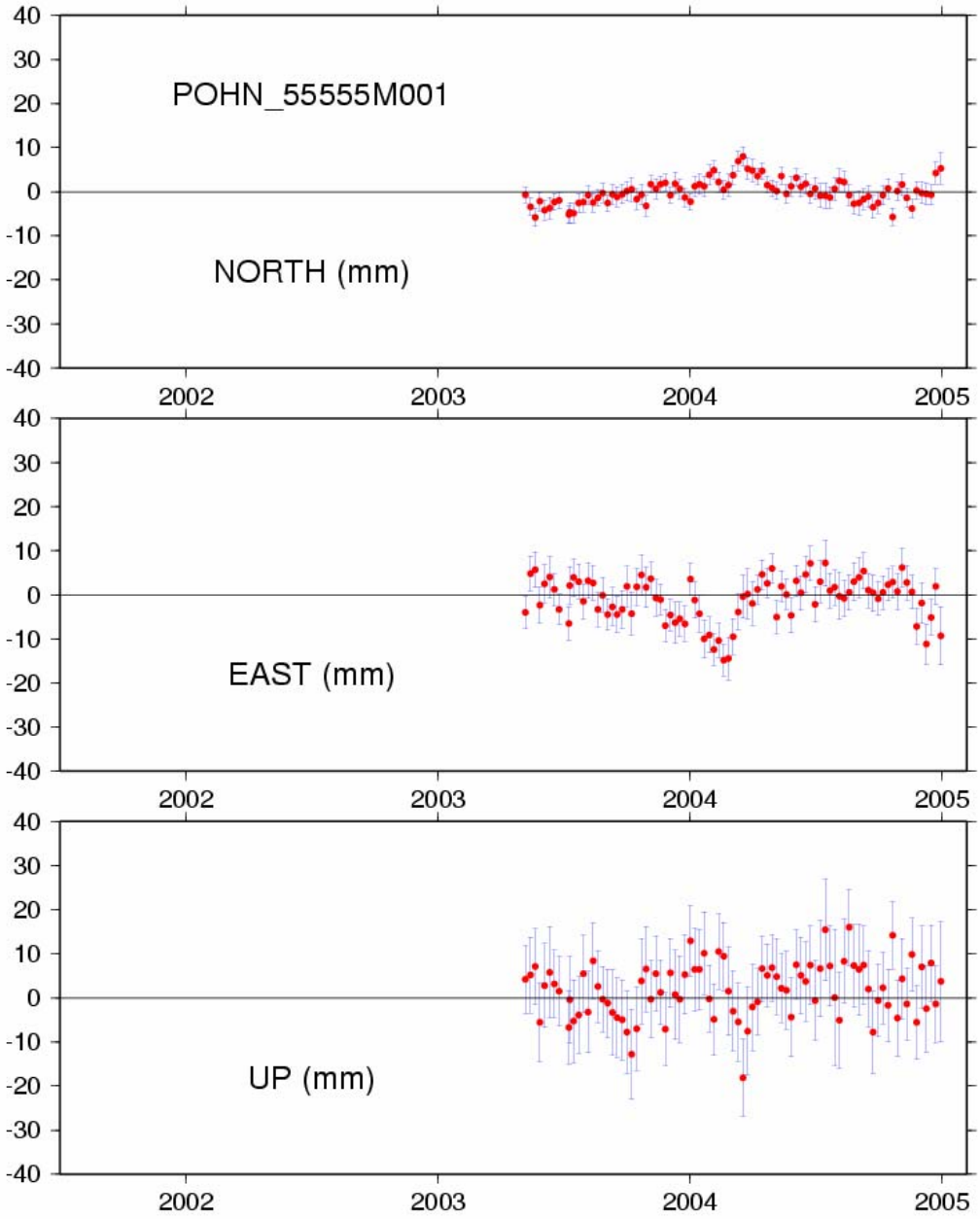

Figure 5 – De-trended Time Series Plot – Micronesia
Trend in Height Component 6.0 mm/yr with an Uncertainty 2.1 mm/yr

2.6 Nauru

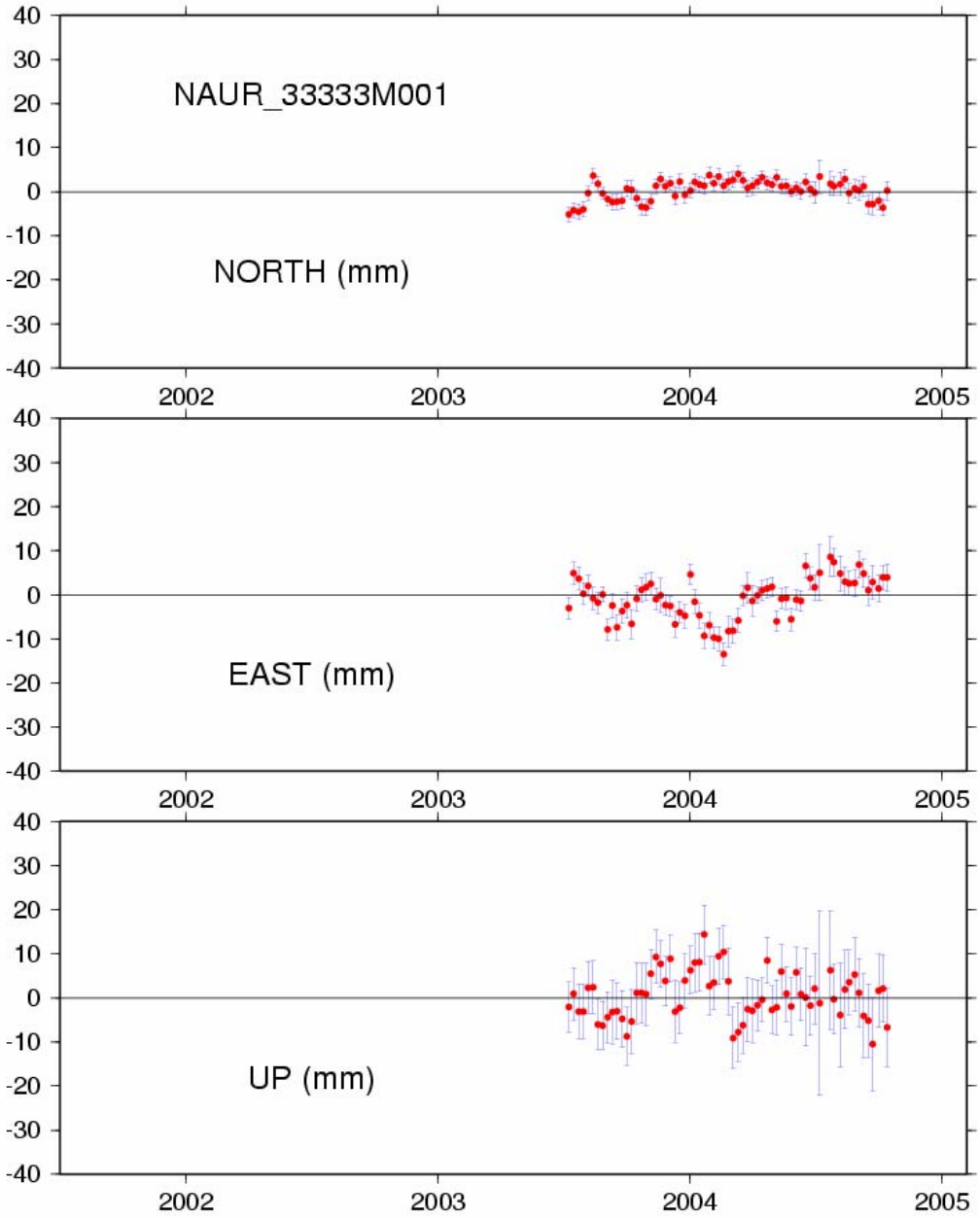

Figure 6 – De-trended Time Series Plot – Nauru
Trend in Height Component 7.8 mm/yr with an Uncertainty 2.3 mm/yr

2.7 Samoa

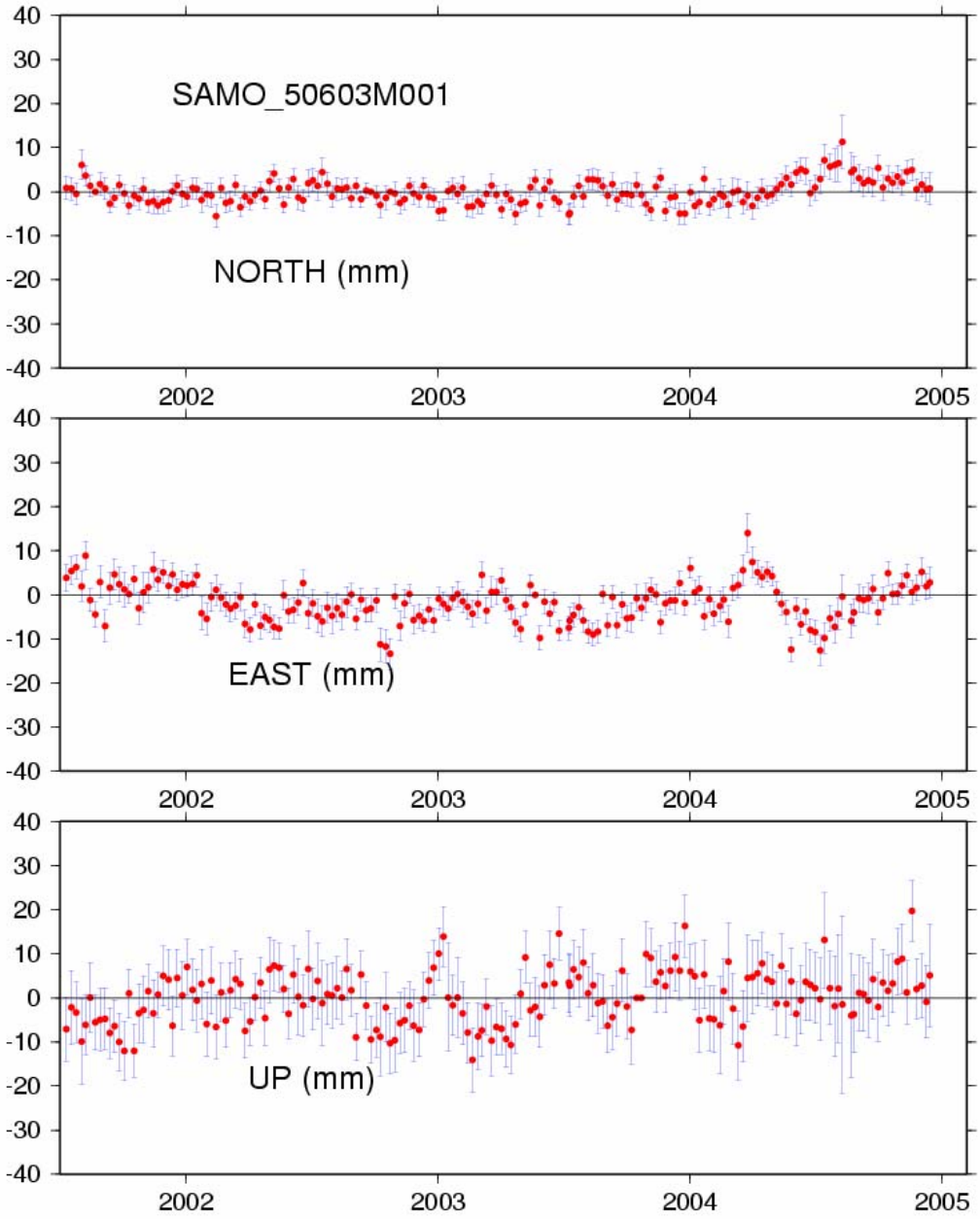

Figure 7 – De-trended Time Series Plot – Samoa
Trend in Height Component –0.3 mm/yr with an Uncertainty 0.5 mm/yr

2.8 Tonga

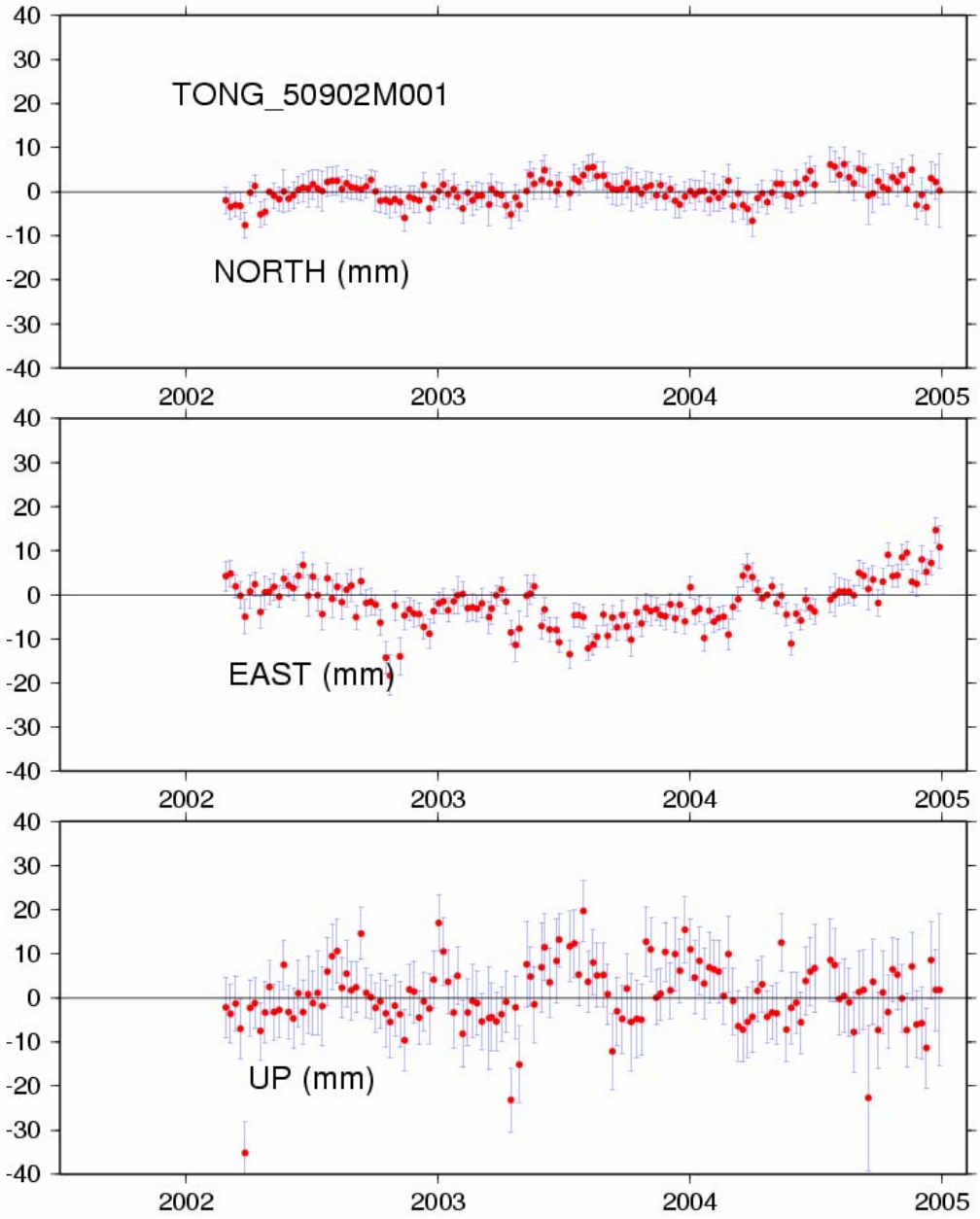

Figure 8 – De-trended Time Series Plot – Tonga
Trend in Height Component 1.8 mm/yr with an Uncertainty 0.8 mm/yr

2.9 Tuvalu

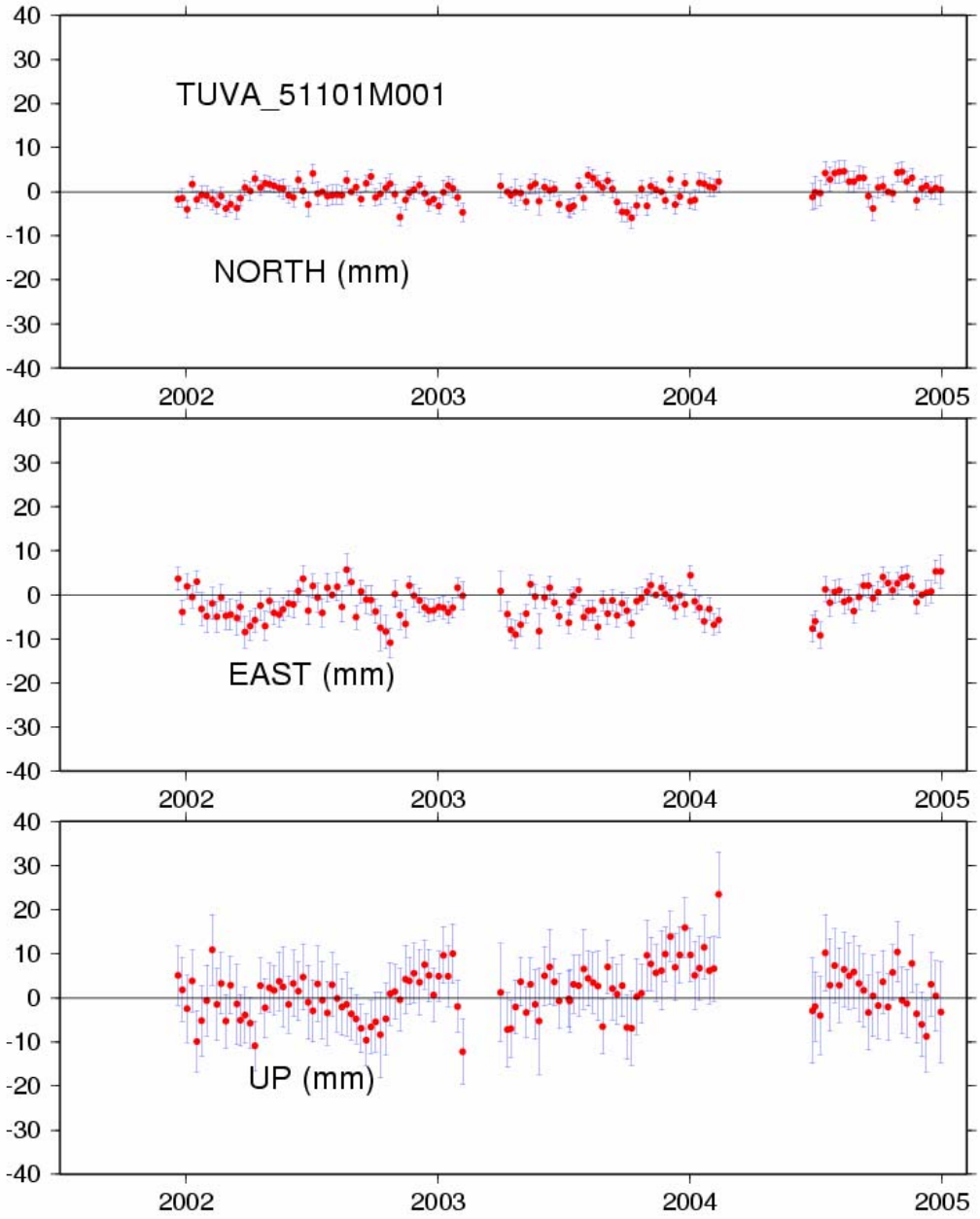

Figure 9 – De-trended Time Series Plot – Tuvalu
Trend in Height Component -0.2 mm/yr with an Uncertainty 0.7 mm/yr

2.10 Vanuatu

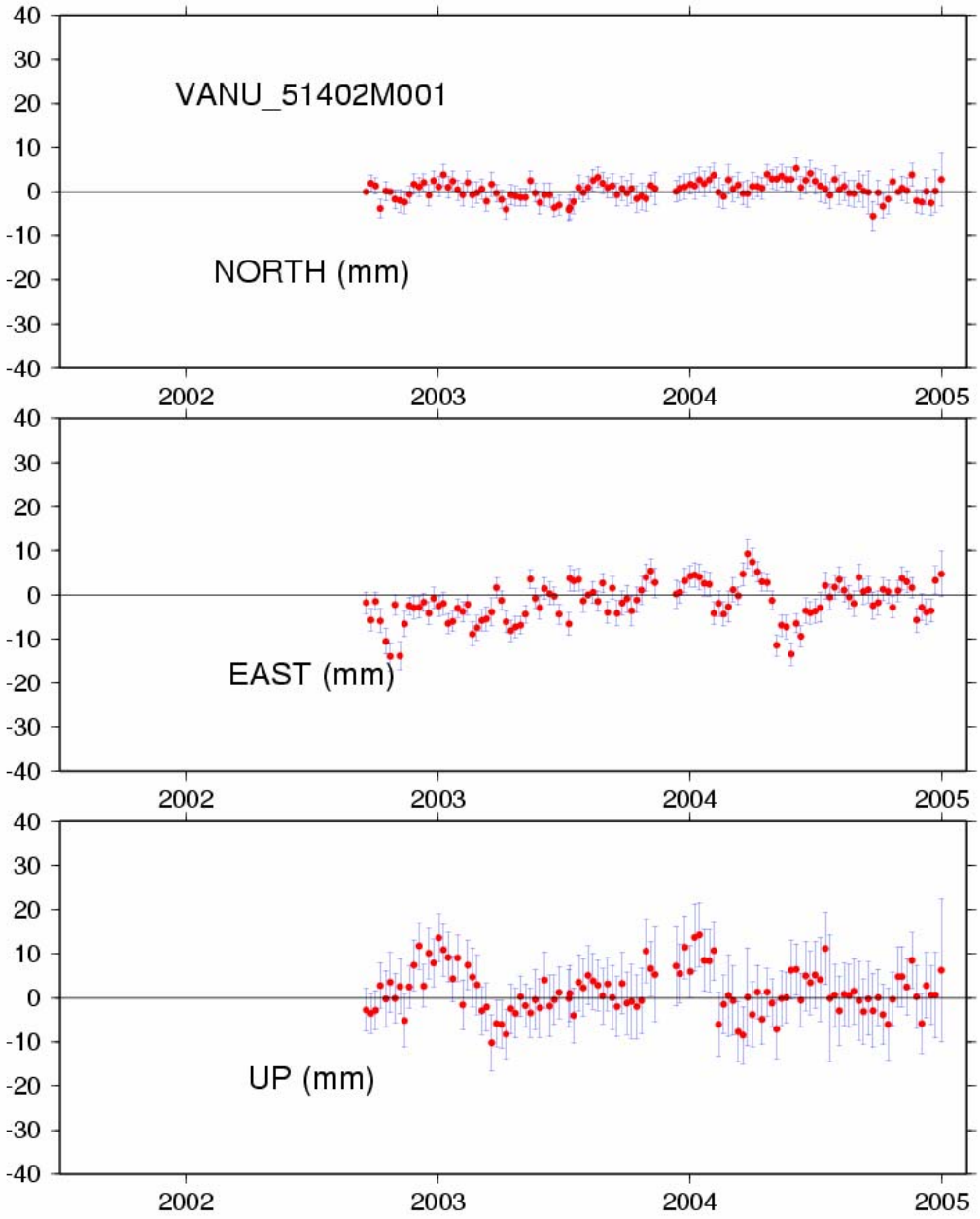

Figure 10– De-trended Time Series Plot – Vanuatu
Trend in Height Component 1.7 mm/yr with an Uncertainty 0.9 mm/yr