Assessment of SLR Network Performance

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Why?

. . . *why not* . . . ☺

The initial motivation for some of the following graphs of station performance arose from an assessment of potential corner cube array design for HEO satellites.

Station Performance

Are there patterns in the SLR data as a function of local time, or as a function of the satellite range?

If so:

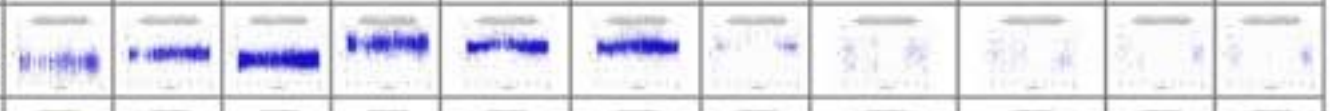
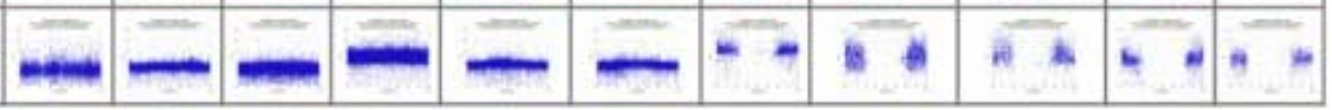
Are the patterns apparent in all of the recent (post 1999) data?

Are there variations from year to year?

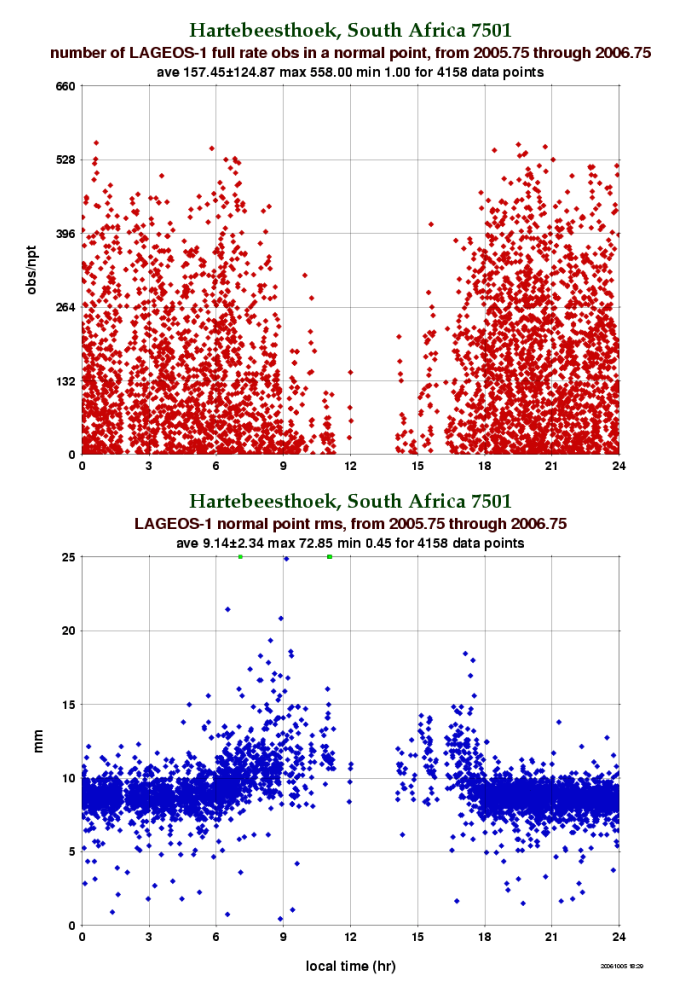
Are there any satellite dependencies?

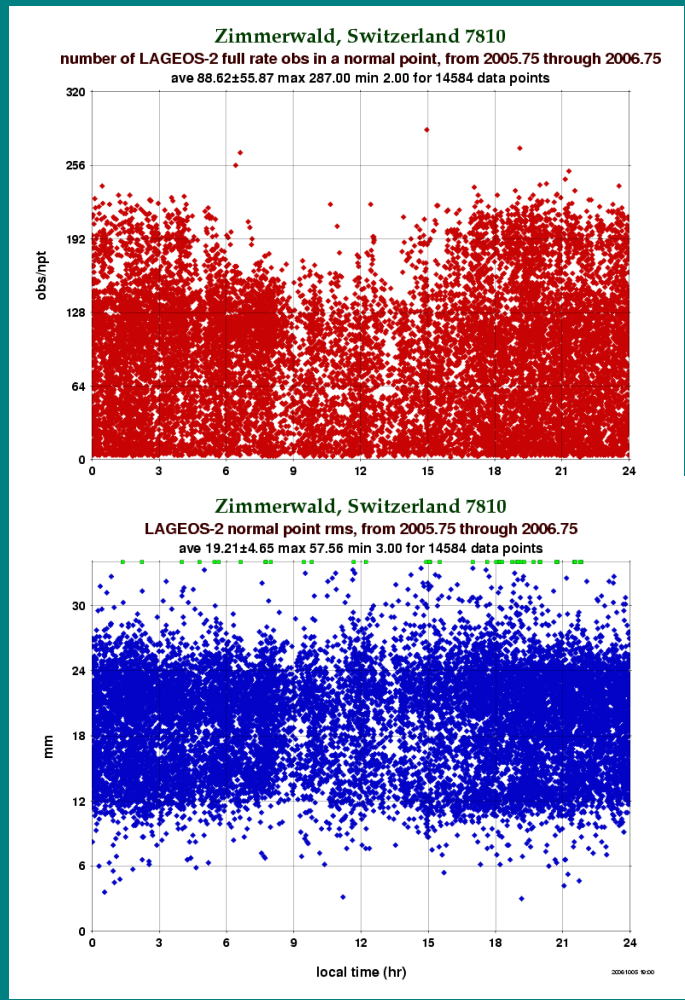
Function of local time?

station and satellite information as a function of local time
timespan begins September 1, 2005 and ends September 31, 2006
(click on the thumb-nail to view the series plot)

site		satellite										
		Grace-A 5 sec	Starlette 30 sec	Jason 15 sec	Ajisai 30 sec	LAGEOS-2 120 sec	LAGEOS-1 120 sec	Etalon-2 300 sec	GLONASS-87 300 sec	GLONASS-95 300 sec	GPS-35 300 sec	GPS-36 300 sec
Hers 7840 13 Hz	(num FR) /npt											
	npt rms *mm*											
Mt_S 7825 50 Hz	(num FR) /npt											
	npt rms *mm*											
Yarr 7090 5 Hz	(num FR) /npt											
	npt rms *mm*											

Function of local time?





Function of satellite range?

station and satellite information as a function of satellite range
timespan begins September 1, 2005 and ends September 31, 2006
(click on the thumb-nail to view the series plot)

site		satellite										
		Grace-A 5 sec	Starlette 30 sec	Jason 15 sec	Ajisai 30 sec	LAGEOS-2 120 sec	LAGEOS-1 120 sec	Etalon-2 300 sec	GLONASS-87 300 sec	GLONASS-95 300 sec	GPS-35 300 sec	GPS-36 300 sec
Hers 7840 13 Hz	(num FR) /npt											
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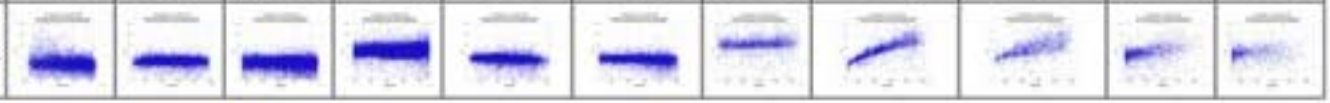
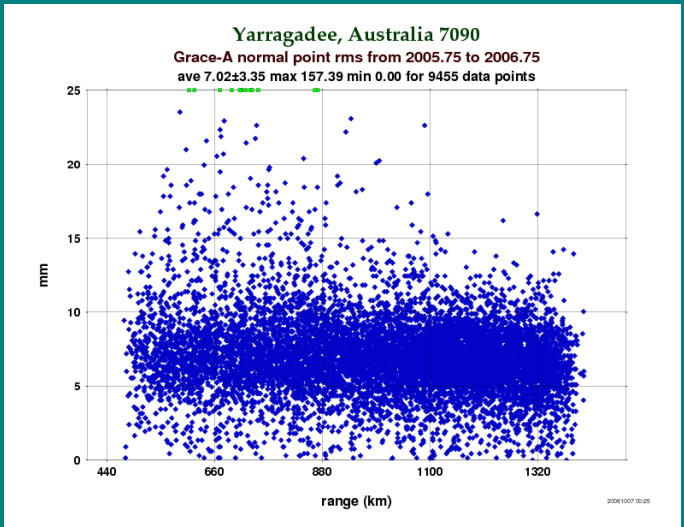
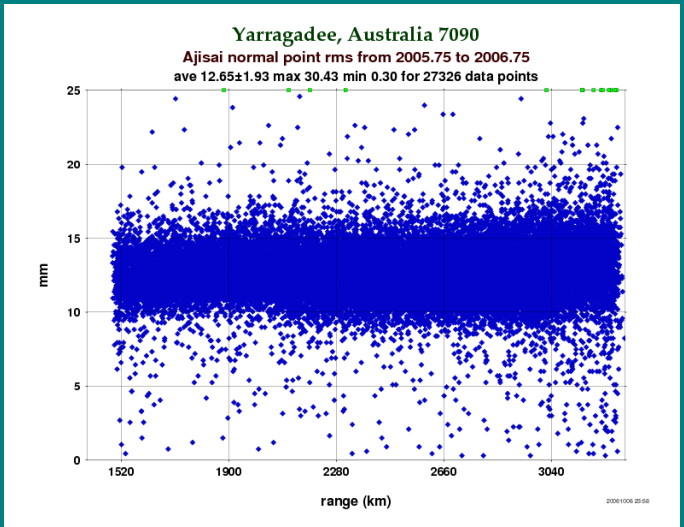
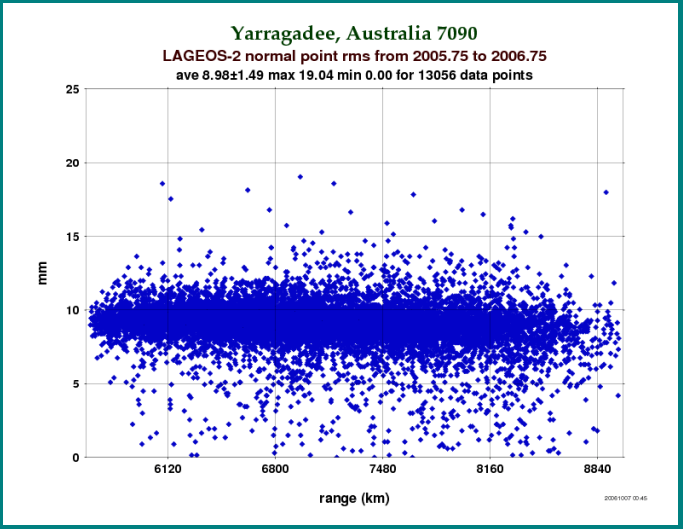
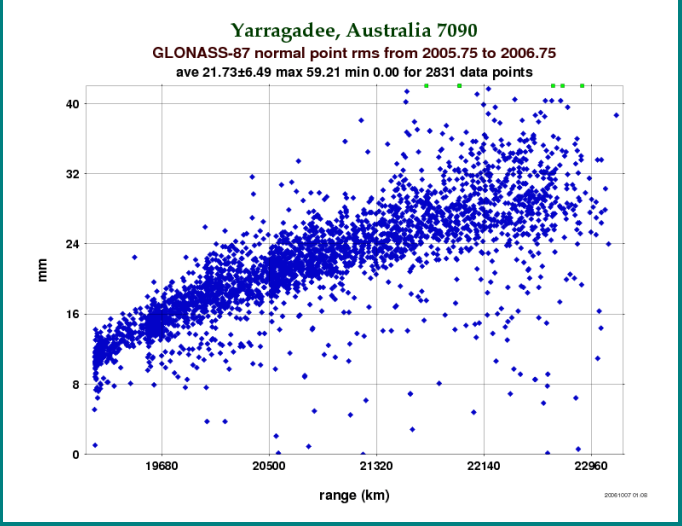
Mt_S 7825 50 Hz	(num FR) /npt											
	npt rms mm											
Yarr 7090 5 Hz	(num FR) /npt											
	npt rms mm											

Function of satellite range?

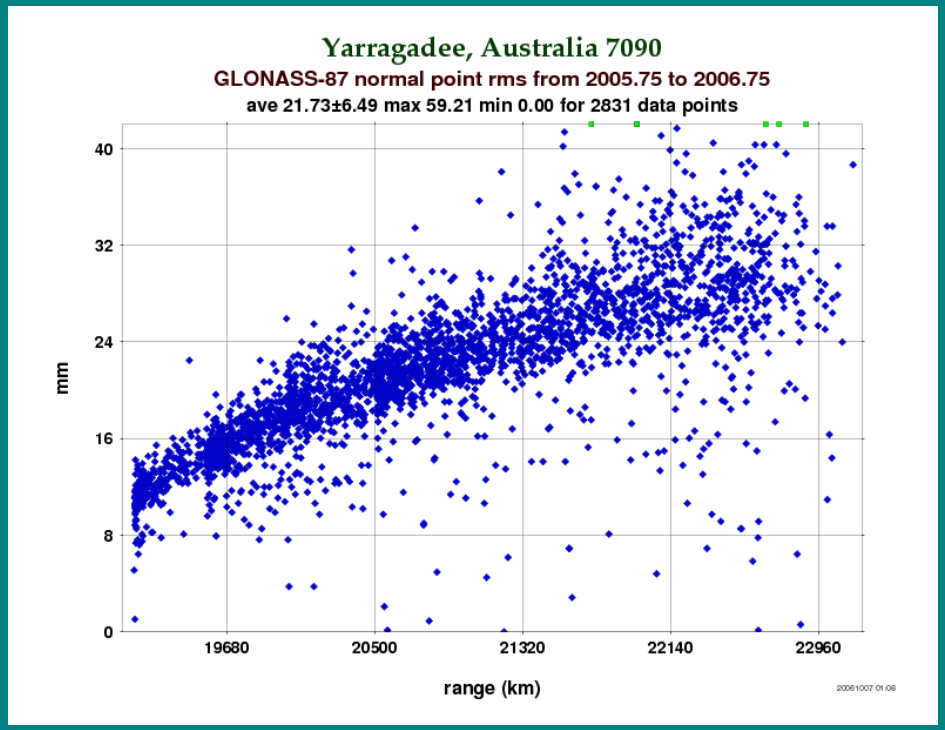


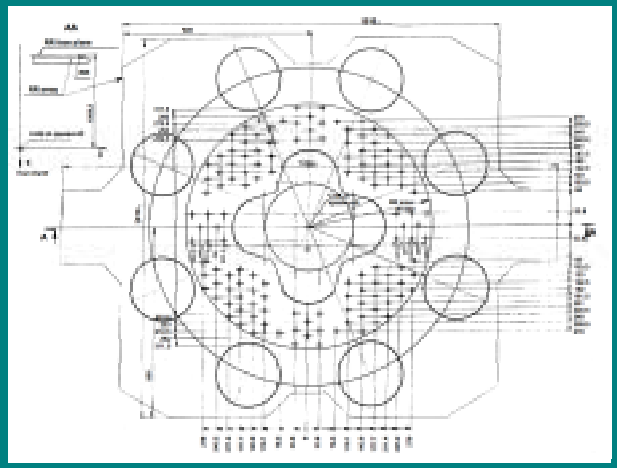


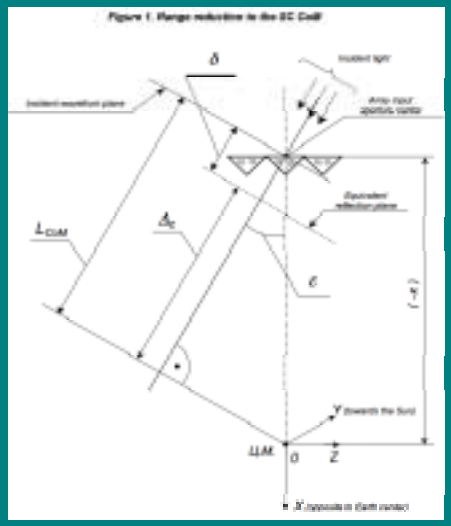




Function of satellite range, or . . .?

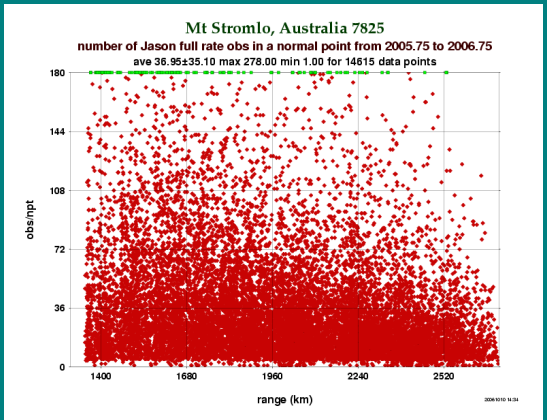


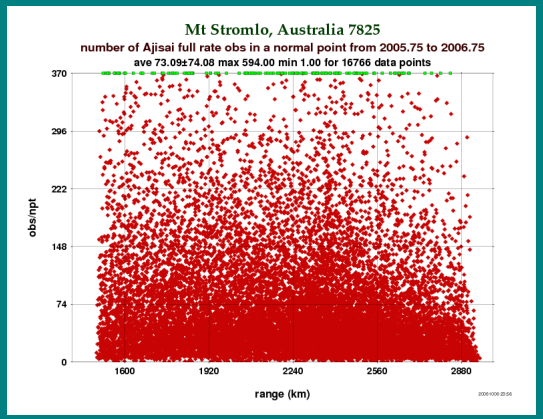


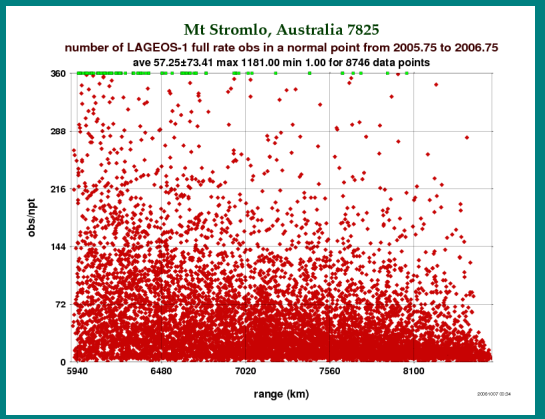


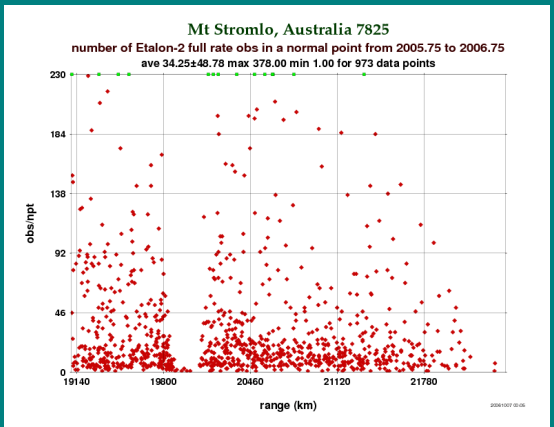
CoM see: http://ilrs.gsfc.nasa.gov/cgi-bin/satellite_missions/select.cgi?sat_code=GL88&sat_name=GLONASS-88&tab_id=com

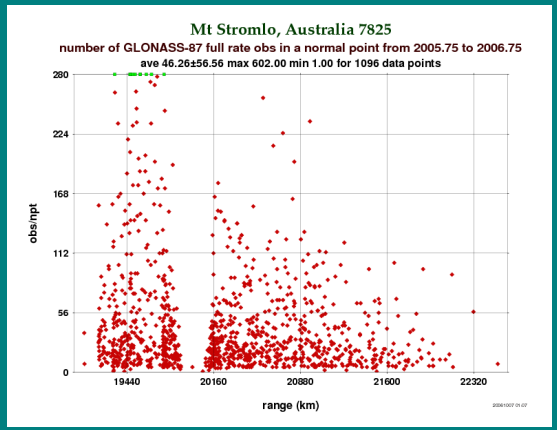
Function of satellite range?

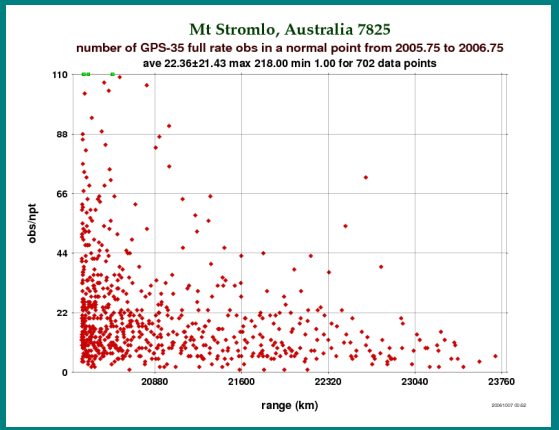












Summary

Consult terra.sgt-inc.com/ilrs for your favorite stie.