Assessment of SLR Network Performance

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15th Laser Ranging Workshop, Canberra, Australia ,October 16 - 20, 2006.



... 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?

| | | ti | statior mespan | and sa begins s (clic | tellite i Septem | nformation ber 1, 200 thumb-nail | on as a fu)5 and en to view the | ds Septo series plo | of local tin ember 31, | ne 2006 | | |
|-----------------------|---------------------|------------------|---------------------|-----------------------------|---------------------|--|--|------------------------|---------------------------|---------------------------|-------------------|-------------------|
| site | | satellite | | | | | | | | | | |
| | | Grace-A 5 sec | Starlette 30 sec | Jason 15 sec | Ajisai 30 sec | LAGEOS- 2 120 sec | LAGEOS- I 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 | | | Reside | 1.00100 | Bath | | Contraction in the | S. M. | and a | See.k | 1 |
| | npt rms | - | - | | S-contrast | | - | | 31.8 | 78 a | | |
| Mt_S 7825 50 Hz | (num FR) /npt | Si Li | Real | ik, il | NUM | | | 1.4 | 4 | Sec. 10 | 1. A. | a sur |
| | npt rms mm | | militan | - | No. | - | - | - | 10 | 新梅 | W. 6 | 14 . H |
| Yarr 7090 5 Hz | (num FR) /npt | | | | | | 1.1 | 1 | 11 | | 1 | |
| | npt rms mm | | - | - | | - | | - | 18 49 | | | |

Function of local time?





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Function of satellite range?

| | | (click on the thumb-nail to view the series plot) satellite | | | | | | | | | | |
|-----------------------|---------------------|---|---------------------|-----------------|------------------|-------------------------|-------------------------|---------------------|---------------------------|---------------------------|-------------------|-------------------|
| site | | 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 | | - | - | | - | | Same of | Sale. | Same a | 5. A. | The. |
| | npt rms mm | - | - | | | | | | - martin | See. | | |
| Mt_S 7825 50 Hz | (num FR) /npt | | | Sale | | - | | - | and the | - | | Sugar. |
| | npt rms | - | - | - | | | - | New York | 100 | AD | | - |
| Yarr 7090 5 Hz | (num FR) /npt | - | - | | | | | - | 12 | and the second | The second | - |
| | npt rms mm | - | - | - | | - | - | - | - | - | - | - |

Function of satellite range?









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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.