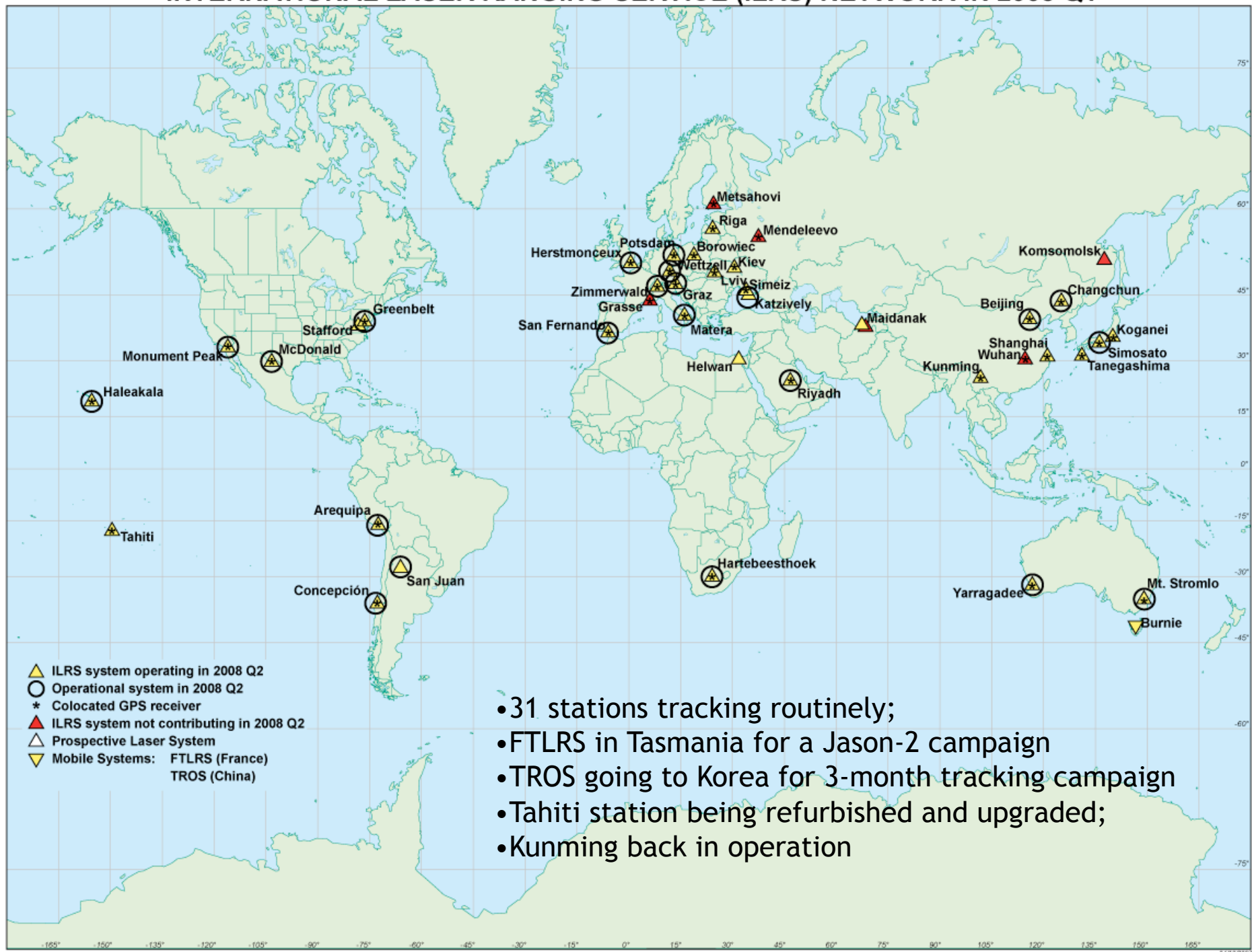


# ILRS Update

April 16, 2008

ILRS Central Bureau  
NASA GSFC, Greenbelt, MD USA  
[cb@cddis.gsfc.nasa.gov](mailto:cb@cddis.gsfc.nasa.gov)

# INTERNATIONAL LASER RANGING SERVICE (ILRS) NETWORK IN 2008 Q1

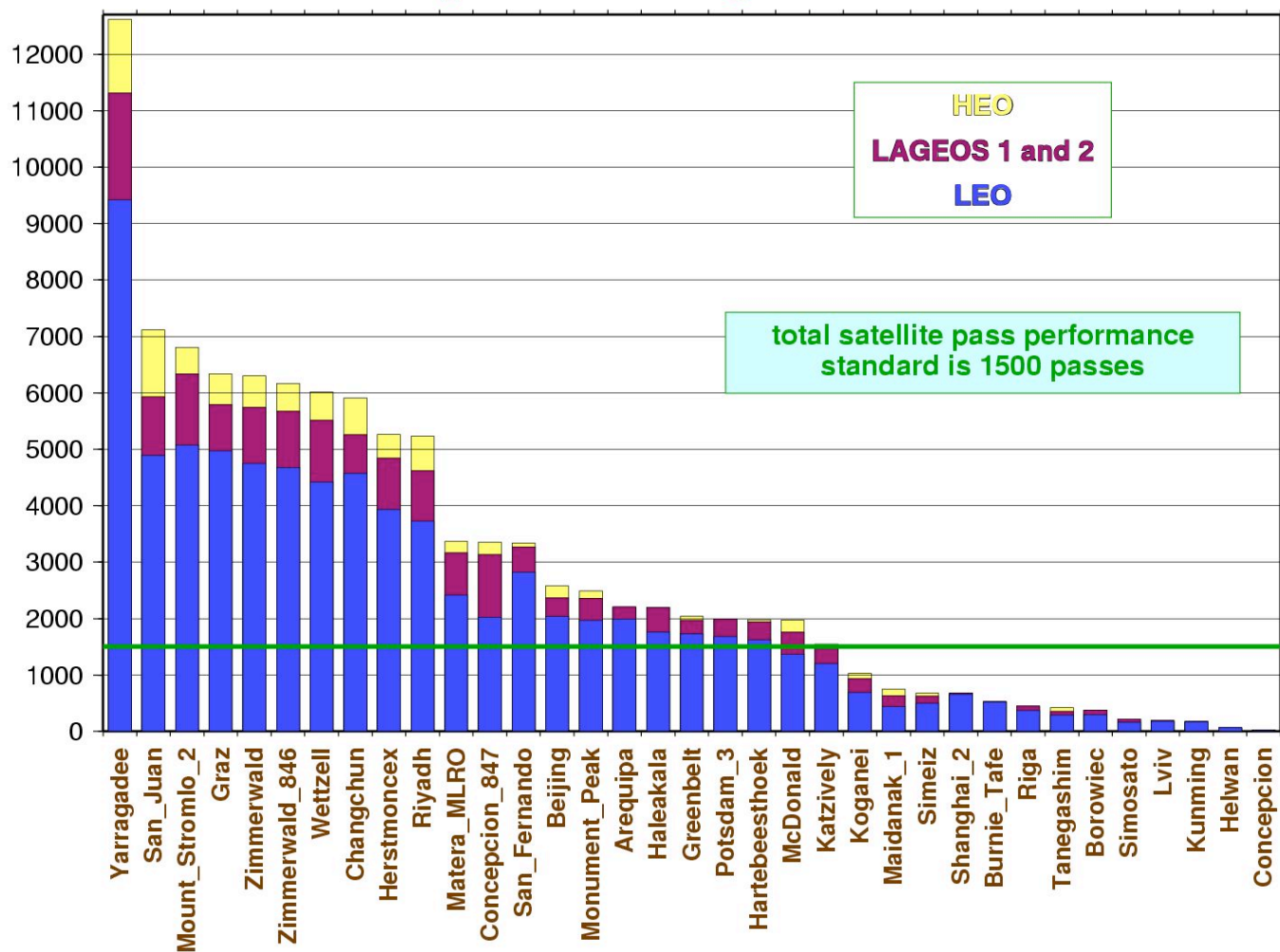


- 31 stations tracking routinely;
- FTLRS in Tasmania for a Jason-2 campaign
- TROS going to Korea for 3-month tracking campaign
- Tahiti station being refurbished and upgraded;
- Kunming back in operation

# Station Performance

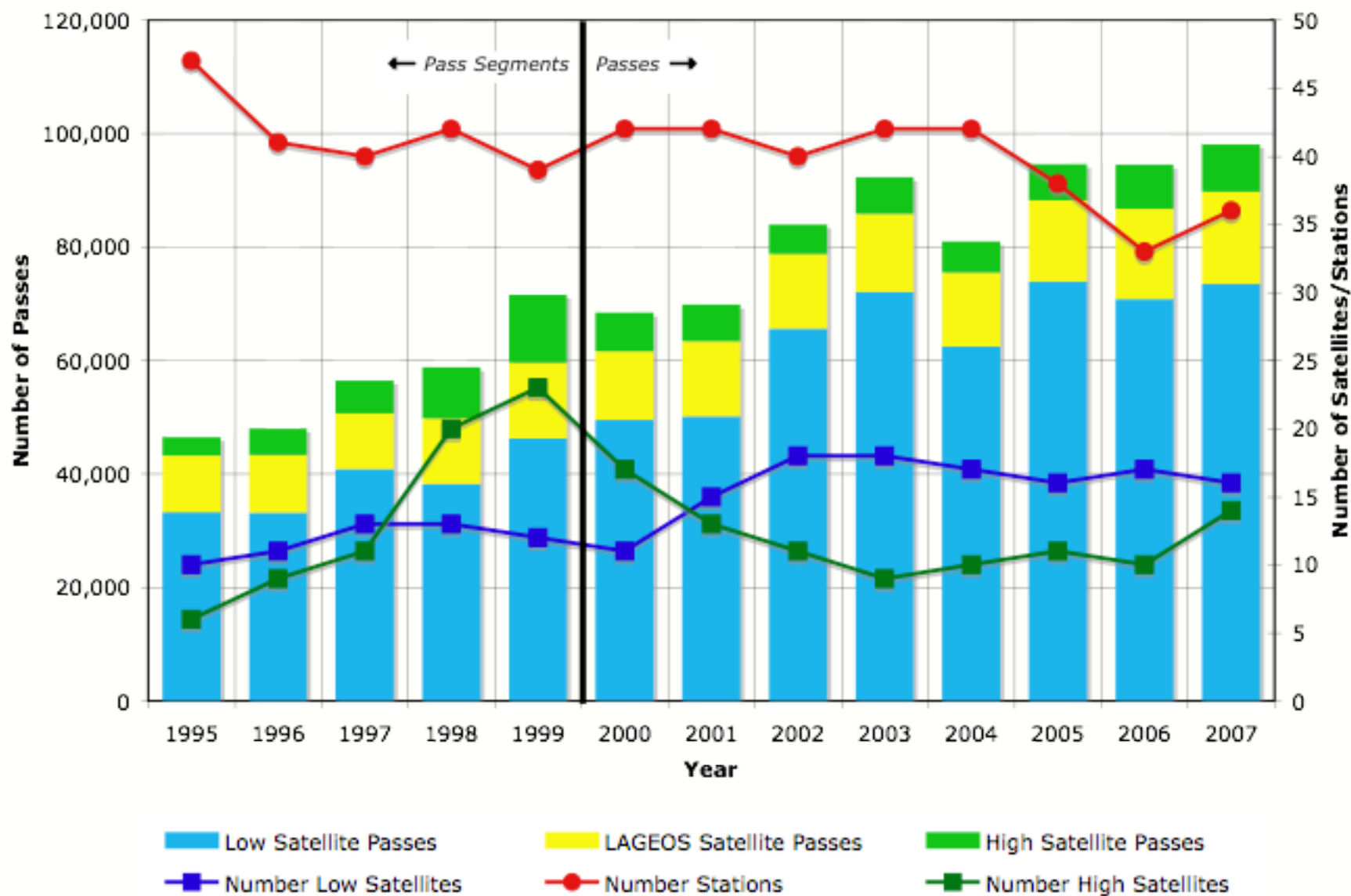
## All Satellites (2008Q1)

**total passes**  
from April 1, 2007 through March 31, 2008



20080331

# Annual Data Yield



# Daily Station Status Report

- Analysts need current station availability information
- Gurtner modified EUROSTAT reporting to generate daily status report
- CB asked stations not already participating in EUROSTAT to use software to provide status messages

http://aiuli3.unibe.ch:8000/slr/daystatus.y08

http://aiuli3.unibe.ch:8000/slr/daystatus.y08

DOY	Date	BURF	CONL	HERL	MATM	POT3	SFEL	TEST	WETL	YARL	ZIML
071	11-Mar-2008	OUT	OUT	OPER		OPER	OPER		OPER	OPER	DOWN
072	12-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
073	13-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
074	14-Mar-2008	OPER	OUT	OUT	OPER	OPER	OPER		OUT	OPER	DOWN
075	15-Mar-2008	OPER	OPER	OUT		OUT	OPER		OPER	OPER	DOWN
076	16-Mar-2008	OPER	OPER	OUT		OPER	OPER		OPER	OPER	DOWN
077	17-Mar-2008	OPER	OPER	OUT	OPER	OPER	OPER	OUT	OUT	OPER	DOWN
078	18-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER	OUT	OPER	OPER	OPER
079	19-Mar-2008	OUT	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
080	20-Mar-2008	OPER	OPER	OPER	OPER	OPER	OUT		OPER	OPER	DOWN
081	21-Mar-2008	OPER	OPER	OPER	OPER	OUT			OPER	OPER	DOWN
082	22-Mar-2008	OPER	OPER	OPER	OUT	OUT			OPER	OPER	OPER
083	23-Mar-2008	OPER	OPER	OPER		OPER			OPER	OPER	OPER
084	24-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
085	25-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
086	26-Mar-2008	OPER	OPER	OPER		OPER	OPER		OPER	OPER	DOWN
087	27-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	OPER
088	28-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
089	29-Mar-2008	OPER	OPER	OPER		OPER	OPER		OPER	OPER	OPER
090	30-Mar-2008	OPER	OPER	OPER		OPER	OPER		OPER	OUT	DOWN
091	31-Mar-2008	OPER	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
092	01-Apr-2008	OUT	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN
093	02-Apr-2008	OUT	OPER	OPER	OPER	OPER	OPER		OPER	OPER	DOWN

# Mission Developments

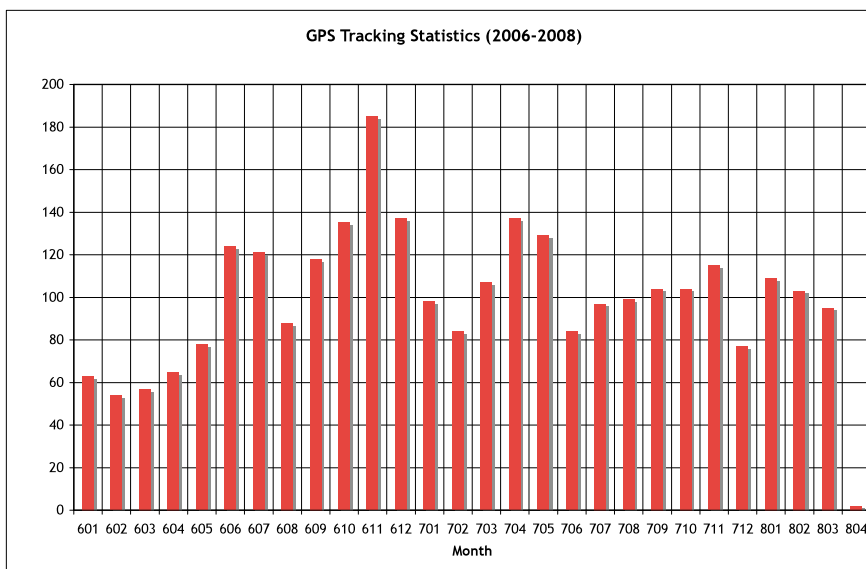
- Supporting 28 missions and lunar tracking;
- ANDE-A reentered in December, ANDE-P predicted to reenter in May; a few stations were able to track down below 300 km; which is a good omen for GOCE;
- Jason-2 planned for launch in June;
- Two-month campaign on GPS-35 and -36 underway; satellites will soon be decommissioned;
- ILRS GB approved support for GOCE (gravity field); launch delayed until Summer/Fall; organizing prediction test with ESOC using CHAMP;
- QZS-1 (test for Japanese Navigation satellite system) approved for ILRS tracking; launch in 2009;
- LRO launch now scheduled for late November;
- GIOVE-B launch scheduled for April 27, 2008.



# GPS Campaign Status

- GPS-35 and -36 satellites will soon be decommissioned
- Intensive campaign underway (21-Mar-2008 through 31-May-2008)
- Nighttime passes visible for GPS-35 in Europe, Saudi Arabia, South Africa, Eastern Australia, Tahiti, and the Western U.S.
- Nighttime passes visible for GPS-36 in Asia, South America, Australia, and Eastern U.S.
- Current status:

Site Name	Station	Start Date	End Date	Number Passes	Number Normal Pts.
Beijing	7249	01-Jan-08	25-Mar-08	3	16
Changchun	7237	01-Jan-08	13-Mar-08	33	189
Concepcion	7405	03-Jan-08	06-Mar-08	10	55
Graz	7839	07-Feb-08	30-Mar-08	19	146
Greenbelt	7105	31-Jan-08	25-Mar-08	3	8
Herstmonceux	7840	05-Jan-08	29-Mar-08	21	77
Katzively	1893	13-Feb-08	13-Feb-08	1	4
Koganei	7308	06-Jan-08	31-Mar-08	5	30
Monument Peak	7110	28-Mar-08	28-Mar-08	1	3
Mount Stromlo	7825	05-Jan-08	16-Mar-08	9	14
Riyadh	7832	02-Mar-08	01-Apr-08	13	74
San Juan	7406	02-Jan-08	01-Apr-08	87	524
Tanegashima	7358	18-Jan-08	31-Mar-08	12	70
Wettzell	8834	11-Jan-08	06-Mar-08	7	24
Yaragadee	7090	06-Jan-08	29-Mar-08	83	286
Zimmerwald	7810	21-Jan-08	23-Jan-08	2	6
<b>Totals:</b>	16 stations			309	1,526





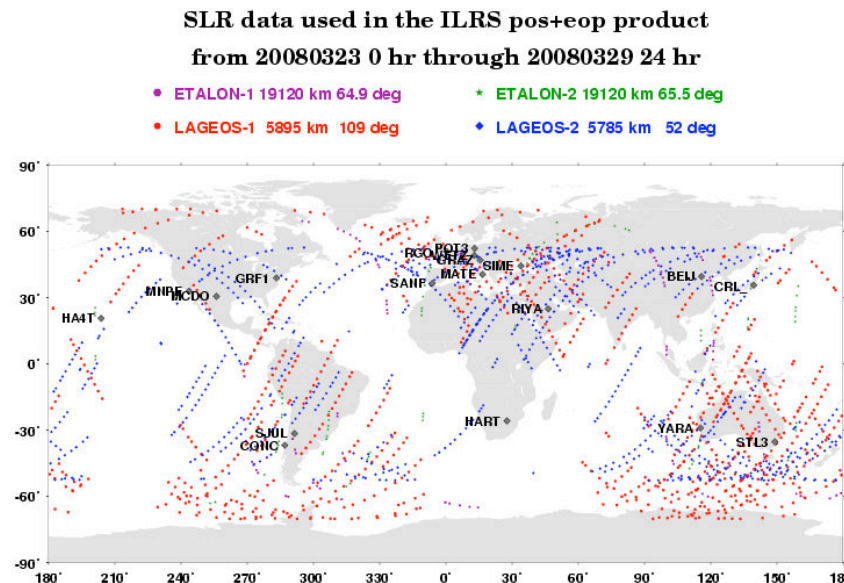
# NGSLR Developments

- Successfully ranged to GLONASS-95 (as well as many LEO and many LAGEOS) with the eyesafe laser
- Successfully ranged to multiple LEO, as well as LAGEOS, ETALON and GLONASS with LRO laser, but so far no luck with GPS
- Full time operator has been hired and will be onboard in next couple of weeks; will hire a second operator shortly
- Began process of applying for NSGLR membership in ILRS
- Expect to perform an intercomparison with MOBLAS-7 in summer of 2008 and begin operations in the fall with two shifts
- Working on completing the automated closed-loop tracking



# ILRS Web Site Developments

- Updated plots of data availability since 2000
- Added new pages for missions and updated future mission list
- Continue to update international laser workshop pages with scans of previous proceedings reports (all but 1<sup>st</sup>, 6<sup>th</sup>, 7<sup>th</sup>, and 9<sup>th</sup> online in PDF form); see <http://ilrs.gsfc.nasa.gov/reports/workshop/index.html>
- Plot of data used in pos+eop product:



# Reports

- EOS issued proceedings (document and CD) from 15<sup>th</sup> International Workshop on Laser Ranging held in Canberra, October 2006
- Updated CDDIS copy of proceedings Web site with links to papers and photos; see <http://cddis.gsfc.nasa.gov/lw15/index.html>
- Continue to update international laser workshop pages with scans of previous proceedings reports (all but 1<sup>st</sup>, 6<sup>th</sup>, 7<sup>th</sup>, and 9<sup>th</sup> online in PDF form); see <http://ilrs.gsfc.nasa.gov/reports/workshop/index.html>
- 16<sup>th</sup> International Workshop on Laser Ranging to be held in Poznan Poland, October 13-17, 2008
- ILRS 2005-2006 report completed and mailed (December 2007)
- Start 2007-2008 report in late fall 2008