

**Report at the
GGOS Bureau for Networks and Communications**

Technical University of Vienna
SEM124
Vienna, Austria

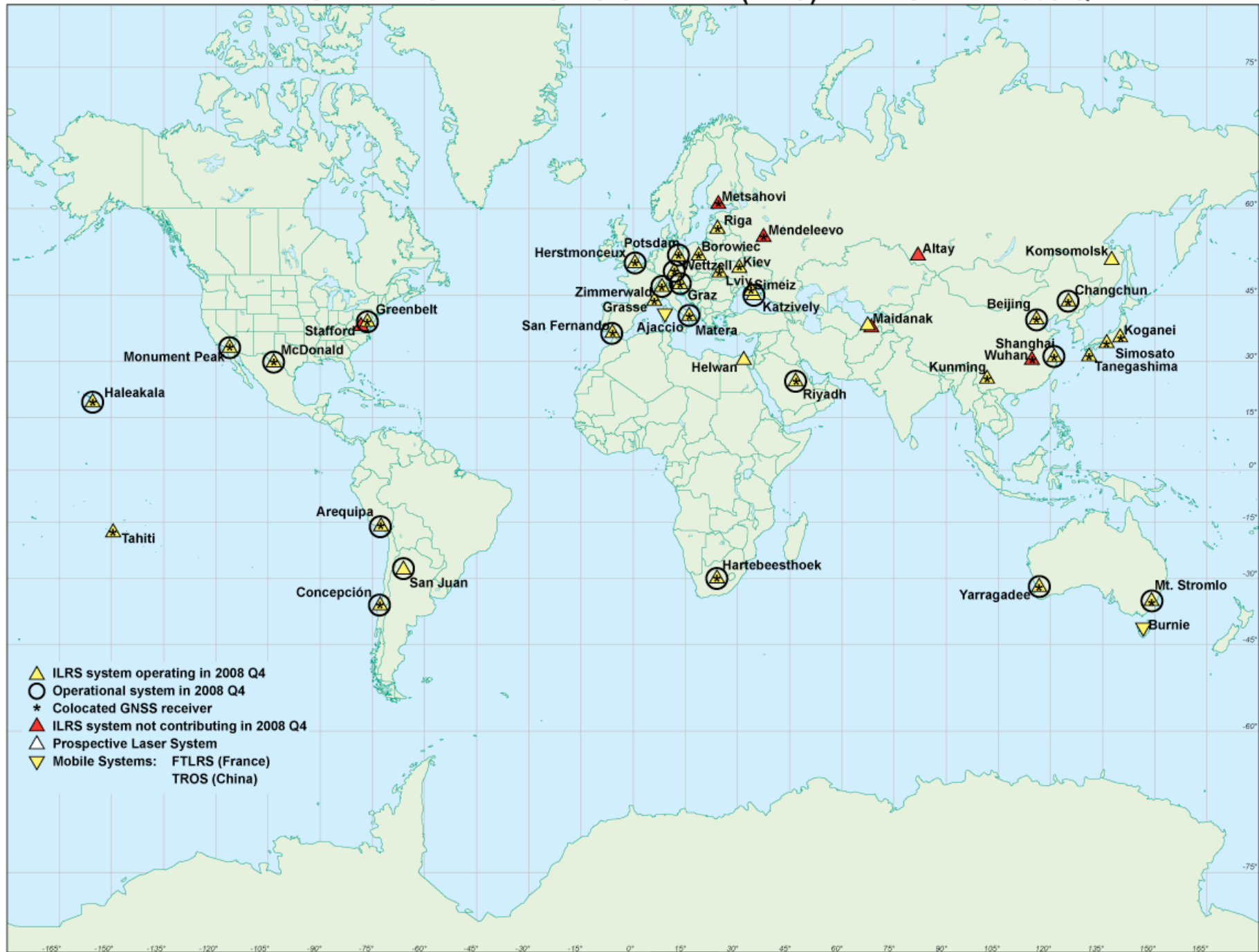
April 22, 2009

ILRS Report

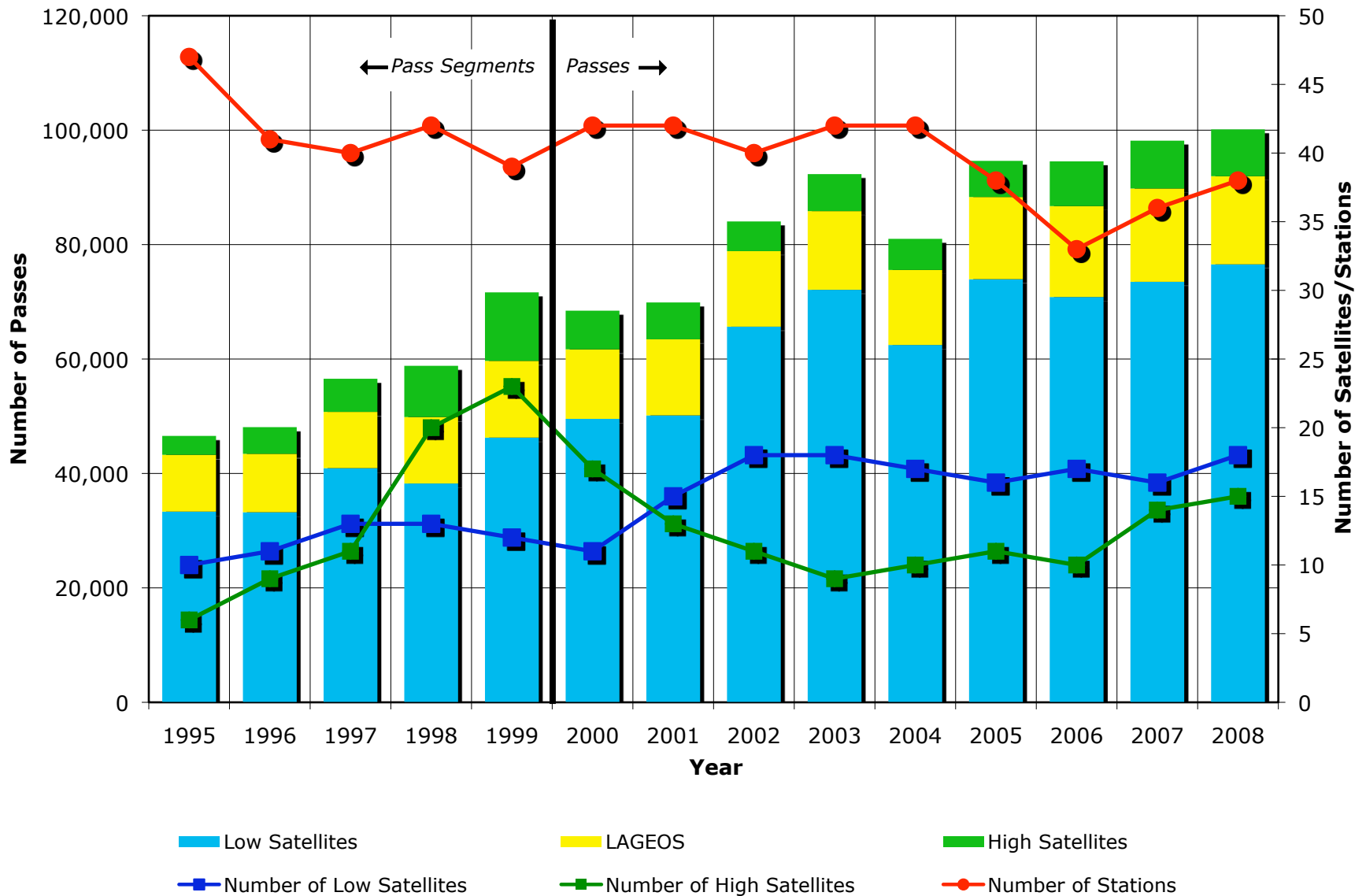
Network Status:

- 33 stations providing tracking data thus far in 2009;
- Newly rebuilt Grasse station (SLR and LLR) now in operation;
- Tahiti now operational; Site review meeting with NASA, CNES, and UFP held October 20-22, 2008;
- Data from Altay Station in Russia;
- TROS campaigns in KASI, Korea in 2008 and 2009;
- FTLRS occupation currently underway in Grasse;
- Healthy flow of data from the NGSLR (SLR2000) at GSFC;
- Several more stations are moving to KHz operation.

INTERNATIONAL LASER RANGING SERVICE (ILRS) NETWORK IN 2008 Q4



Annual Data Yield



Mission Developments

- Supporting 31 missions and lunar tracking
- Tracking 8 GNSS satellites: GPS 35 and 36, GLONASS-102, 109, and 115 (replaced 99), GIOVE- A and B, COMPASS M1;
- Recent Missions added to the roster: Jason-2, SOHLA-1, GOCE, COMPASS-M1
- Seven stations are supporting T2L2;
- Upcoming launches of approved missions:
 - ◆ STSAT-1 (Korea): April 2009
 - ◆ ANDE (US): June 2009
 - ◆ BLITS (Russian): June 2009
 - ◆ QZSS-1(Japanese): 2009 (GNSS)
 - ◆ Lunar Orbiter Mission (NASA): June 2009- One way ranging

Analysis

- ILRS solutions (1983 - present) for the next ITRF have been sent to the IERS;
- Pilot Project for assessment of an ILRS product of daily solutions for EOP is underway;
- Pilot Project for development of ILRS orbital data products is underway.
- Centers
 - ◆ 8 Analysis Centers
 - ◆ 17 Associate Analysis Centers
 - ◆ 4 Lunar Analysis Centers

GNSS Retroreflector Arrays

- ILRS Standard for GNSS retroreflectors is posted and advertised
 - ◆ Some additional constraints on ground pattern have been suggested
- Talk given at the Third Meeting of the International Committee on GNSS in Pasadena on December 8 -12, 2008
- GPS
 - ◆ Meeting at Lockheed-Martin on February 18 to discuss placement options for arrays on GPS-3 series (2014 - 17 timeframe)
 - ◆ Talk invited at the Users Partnership Council on May 14
 - ◆ Keep feeding NASA material to argue for the arrays
- Galileo
 - ◆ Met with the Director of ASI to discuss our needs and requirements on Galileo
 - ◆ Dialogue underway; they are focused on the ILRS Standard with uncoated cubes
 - ◆ Trying to get some cubes to INFN for testing
- COMPASS
 - ◆ Success with the uncoated cubes on COMPASS
- Signal link test underway on the GNSS satellites - Graham Appleby

Meetings

Past Meeting:

- 16th International Workshop on Laser Ranging, Poznan, Poland, Oct. 17, 2008;

Upcoming Meetings:

- ILRS Missions WG, TU Vienna, April 20, 2009
- ILRS Data Formats and Procedures WG, TU Vienna, April 22, 2009
- ILRS Governing Board Meeting, TU Vienna, April 22, 2009
- ILRS Analysis WG Meeting, TU Vienna, April 24, 2009
- **SLR Tracking in GNSS Constellations, Metsovo Greece, September, 2009:**
- 17th International Workshop on Laser Ranging, Concepción, Chile, Jan. 2011: