



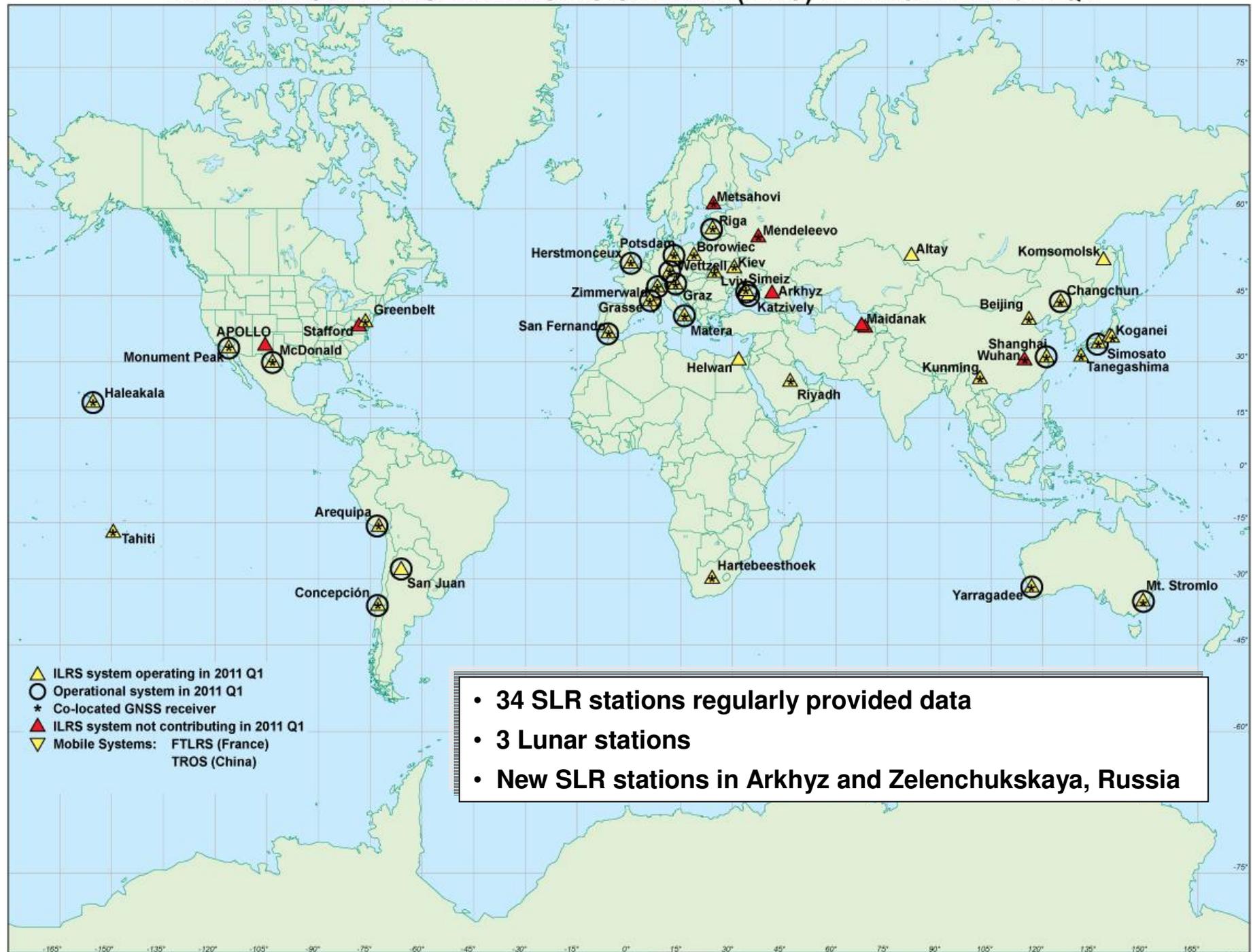
ILRS Station Performance

(Where do we stand? What do we need?)

Mike Pearlman and Carey Noll

International Workshop on Laser Ranging
Bad Koetzting, Germany
May 16, 2011

INTERNATIONAL LASER RANGING SERVICE (ILRS) NETWORK IN 2011 Q1

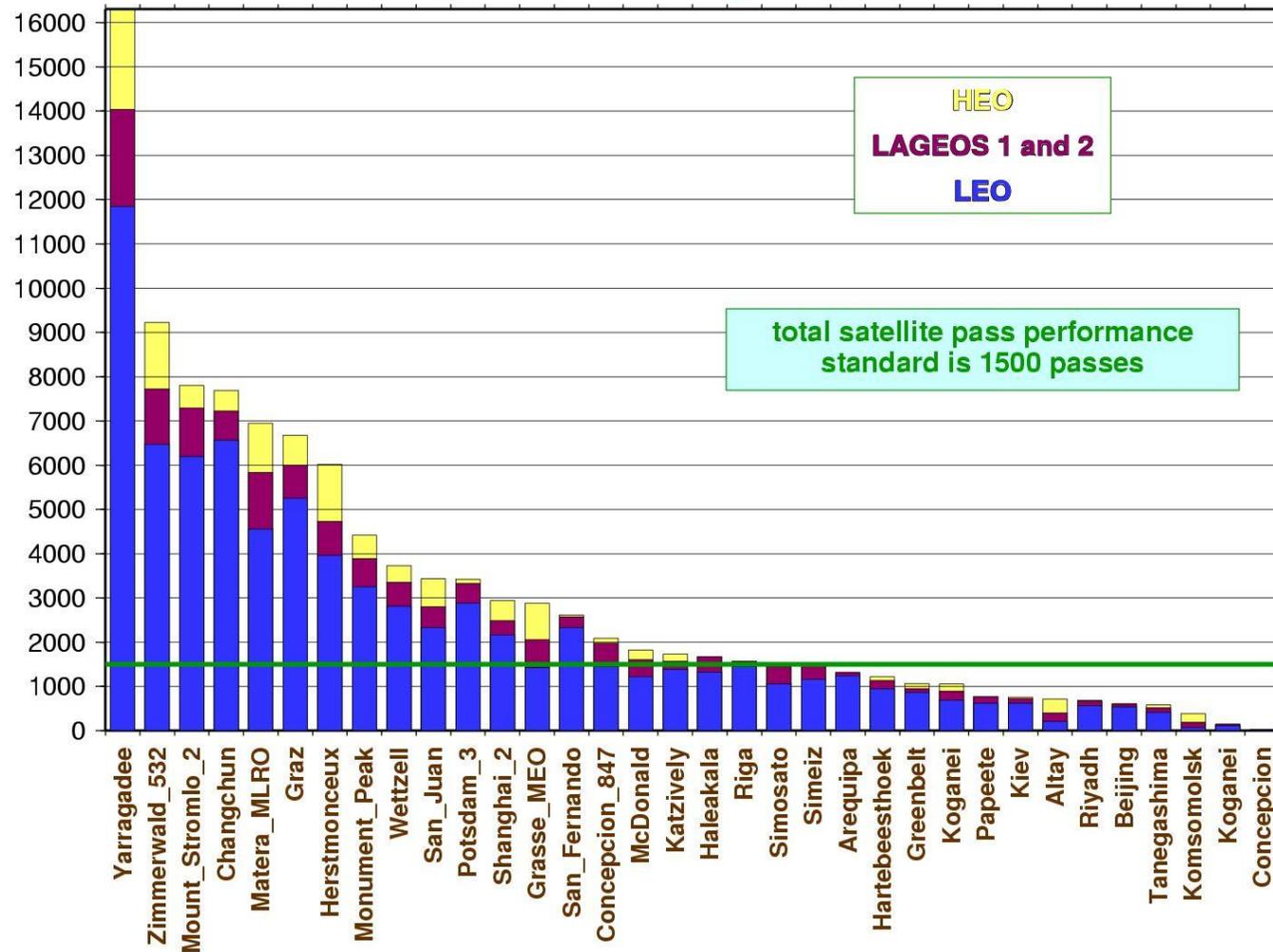


- 34 SLR stations regularly provided data
- 3 Lunar stations
- New SLR stations in Arkhyz and Zelenchukskaya, Russia

Station Performance

All Satellites (2011Q1)

total passes
from April 1, 2010 through March 31, 2011

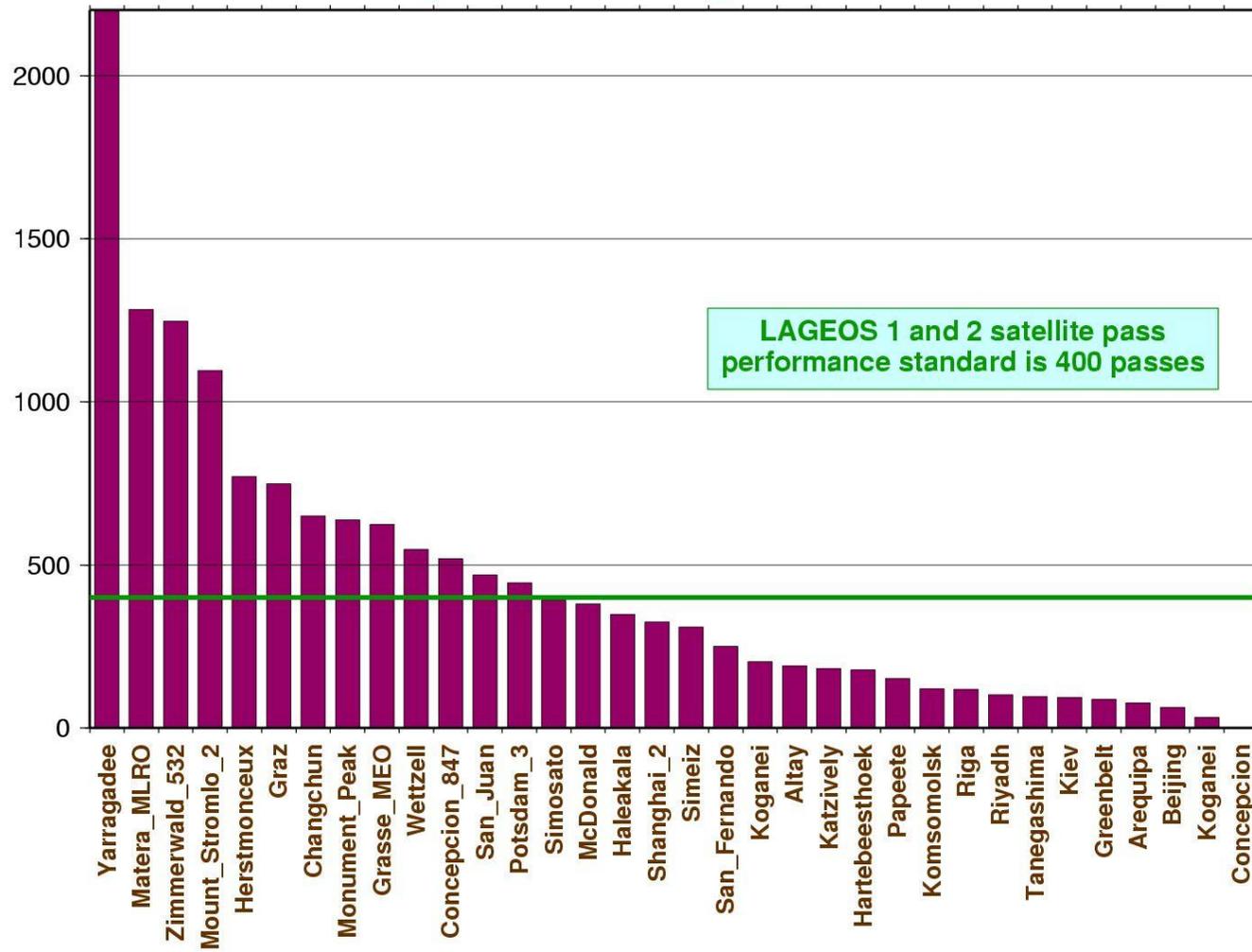


Note: One third of the stations do not achieve 1500 passes per year



Station Performance LAGEOS Satellites (2011Q1)

**LAGEOS 1 and 2 passes
from April 1, 2010 through March 31, 2011**



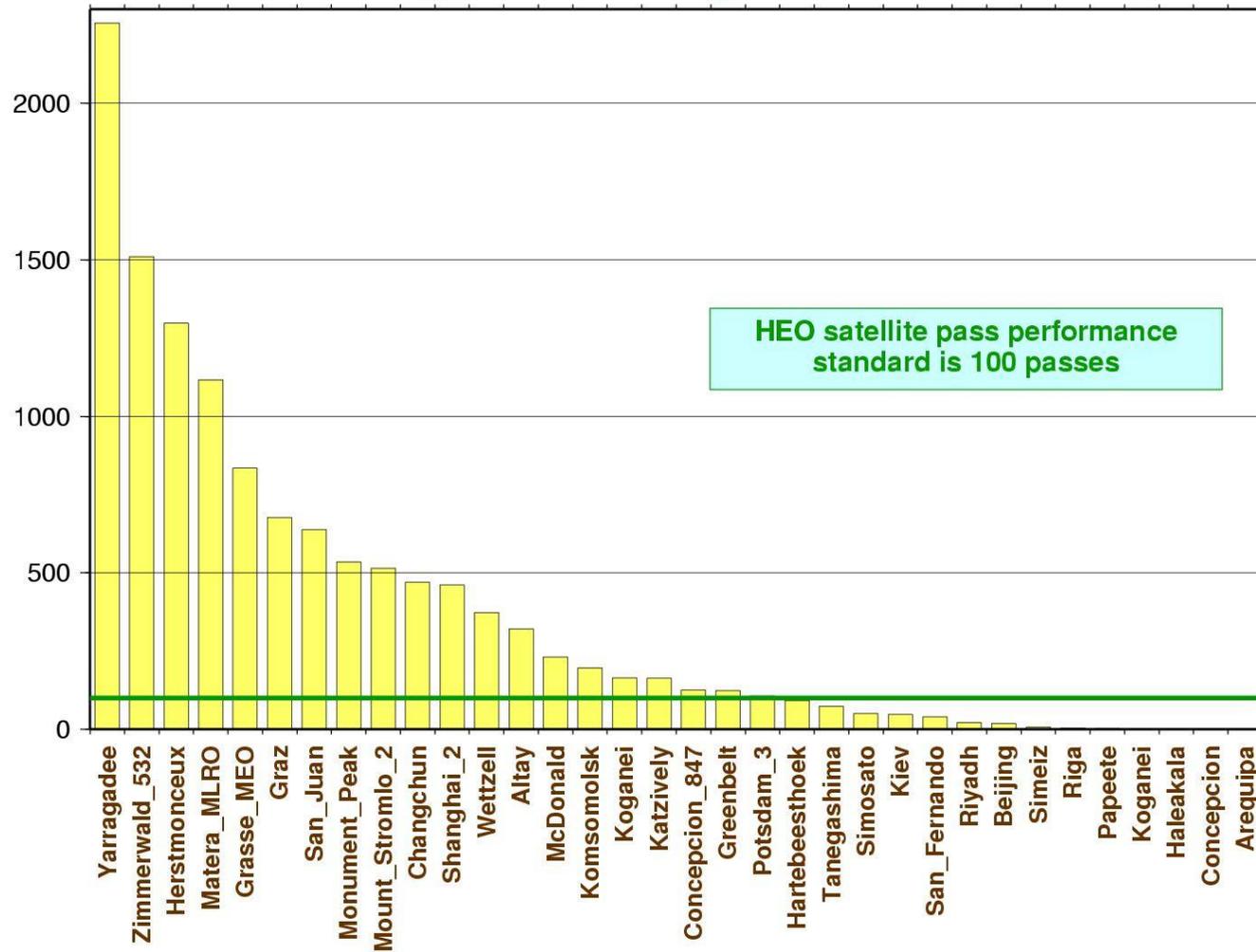
Note: More than half of the station do not achieve 400 LAGEOS passes per year



Station Performance

High Satellites (2011Q1)

HEO passes
from April 1, 2010 through March 31, 2011

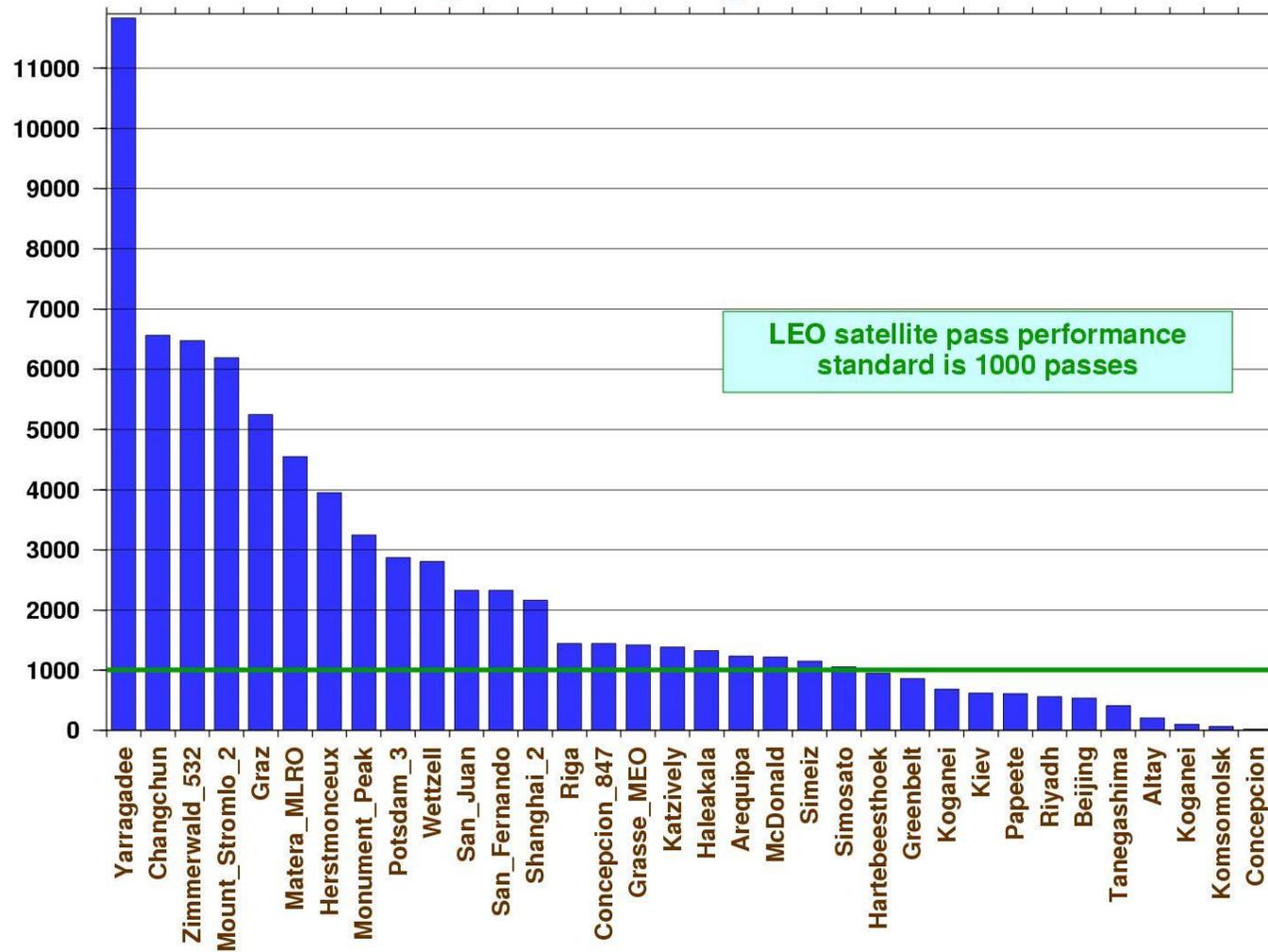




Station Performance

Low Satellites (2011Q1)

LEO passes
 from April 1, 2010 through March 31, 2011

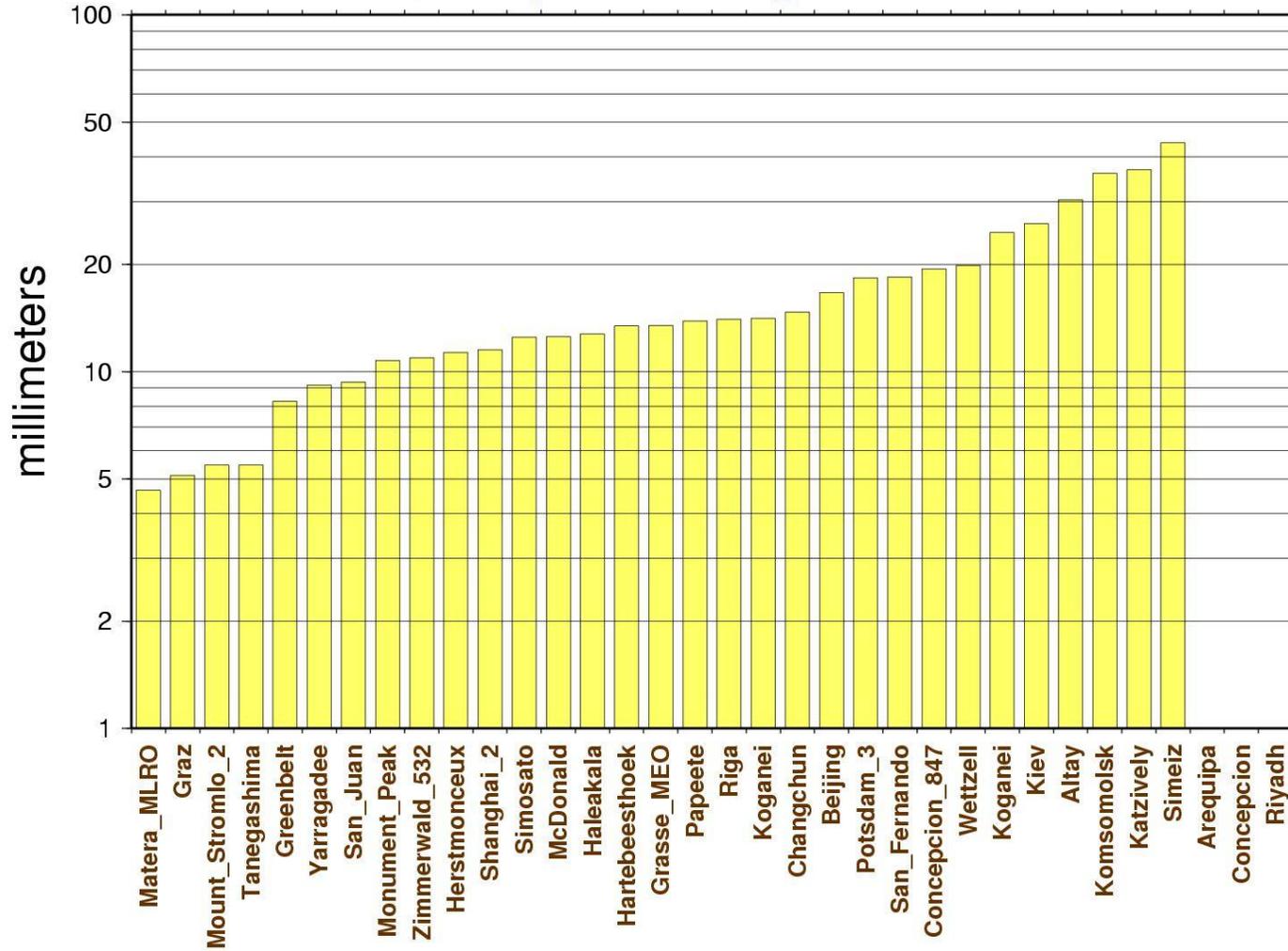




Station Performance

LAGEOS RMS (2011Q1)

LAGEOS RMS
from January 1, 2011 through March 31, 2011

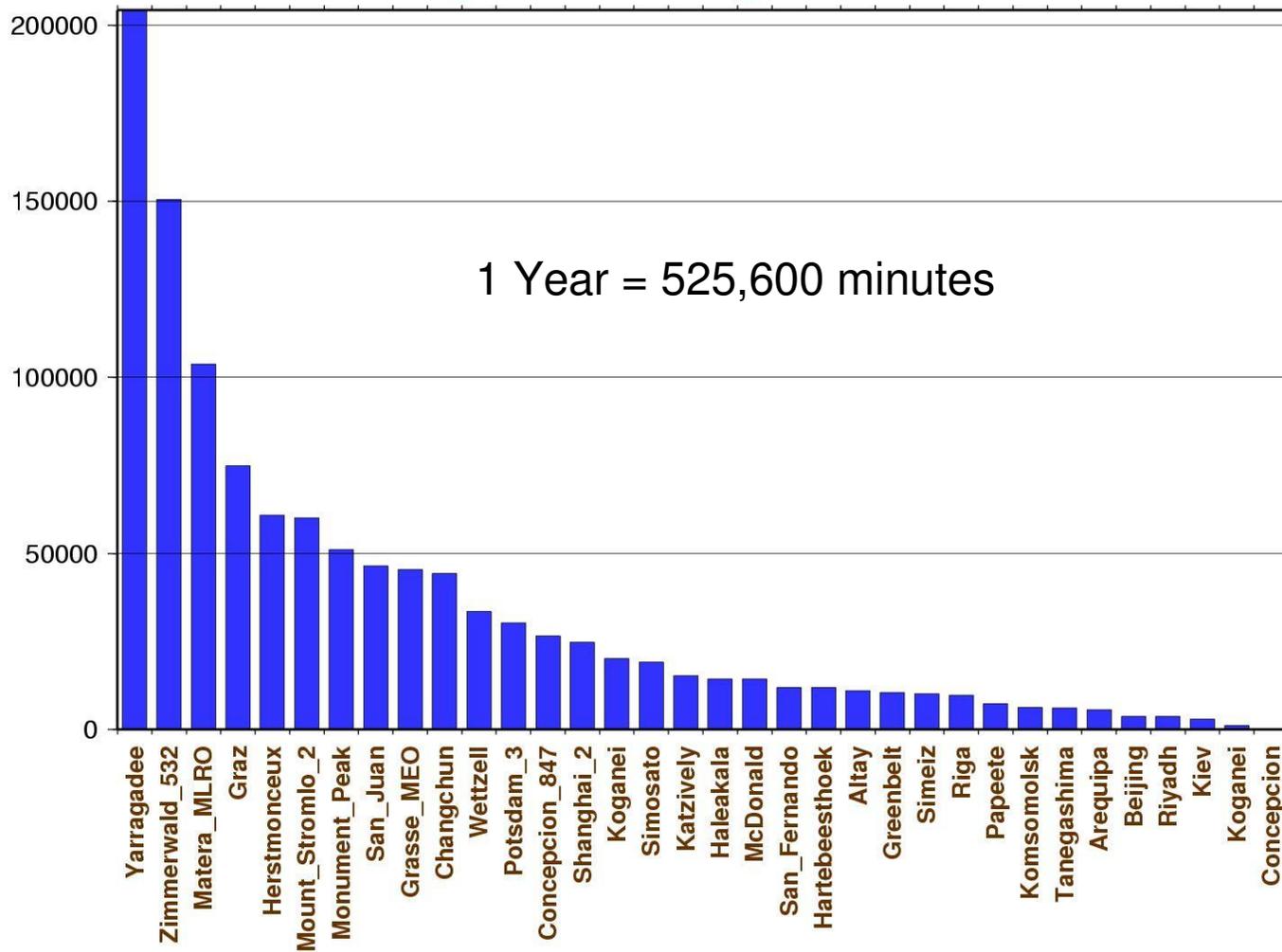




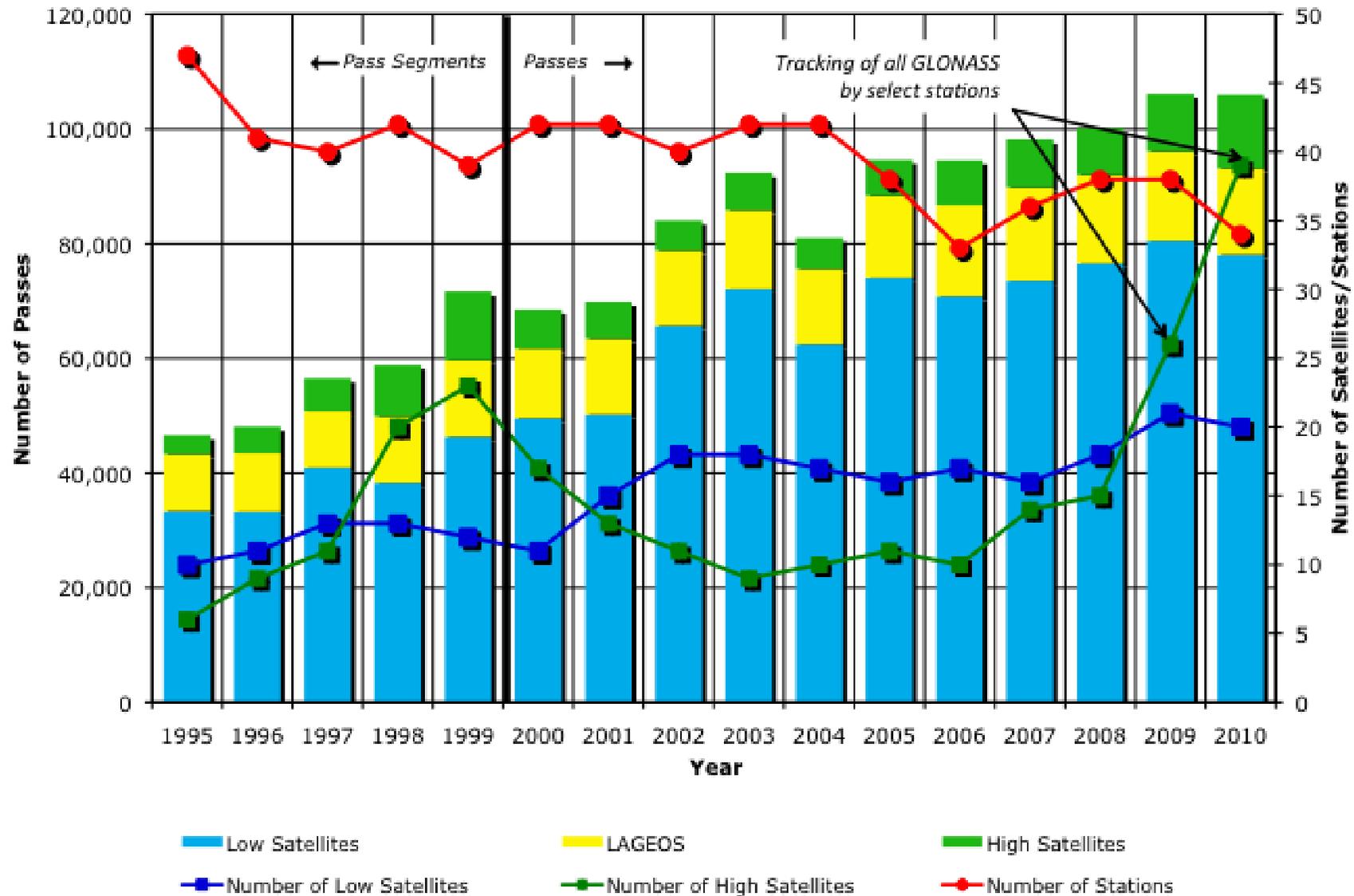
Station Performance

Minutes of Data (2011Q1)

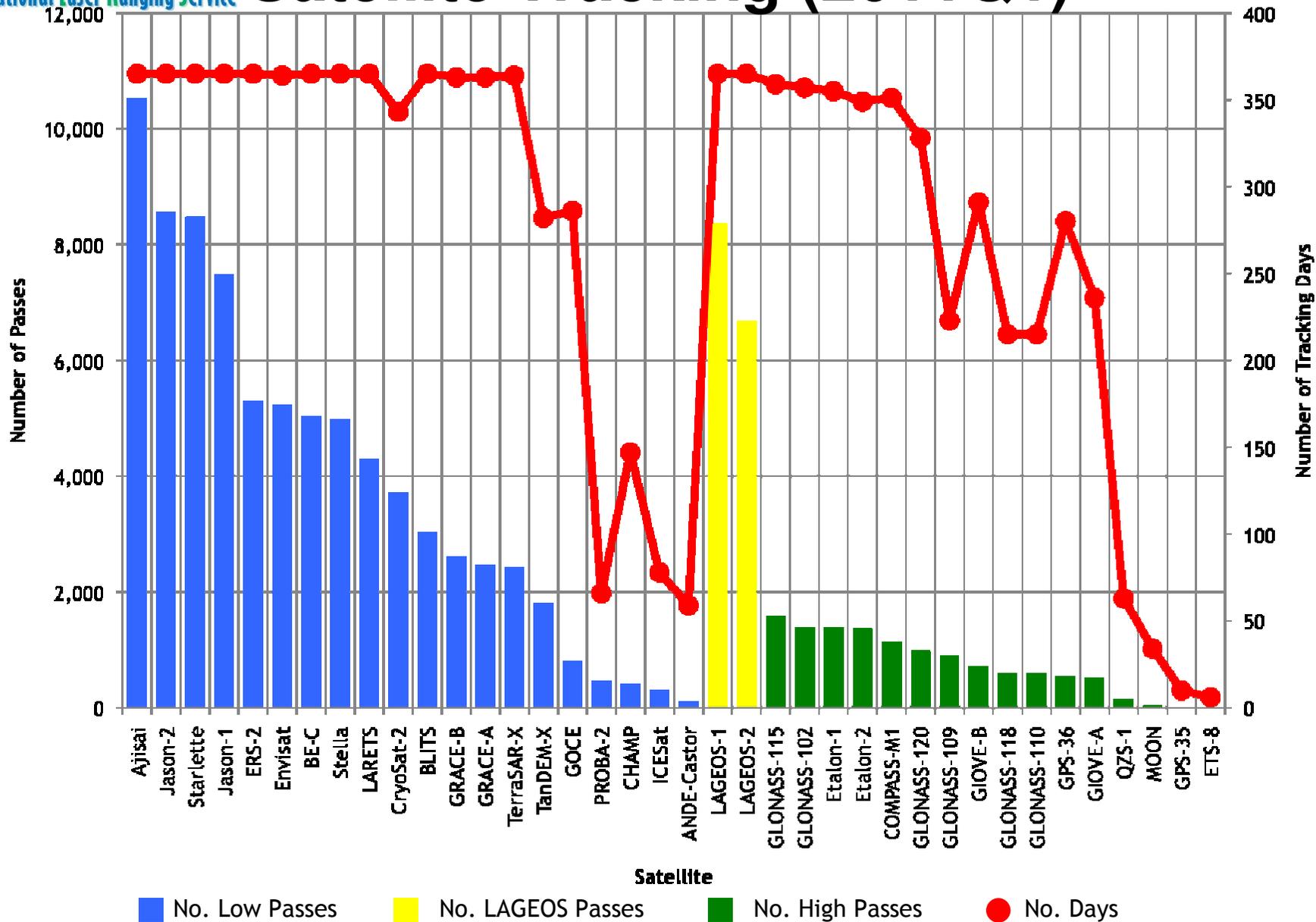
minutes of data
from April 1, 2010 through March 31, 2011



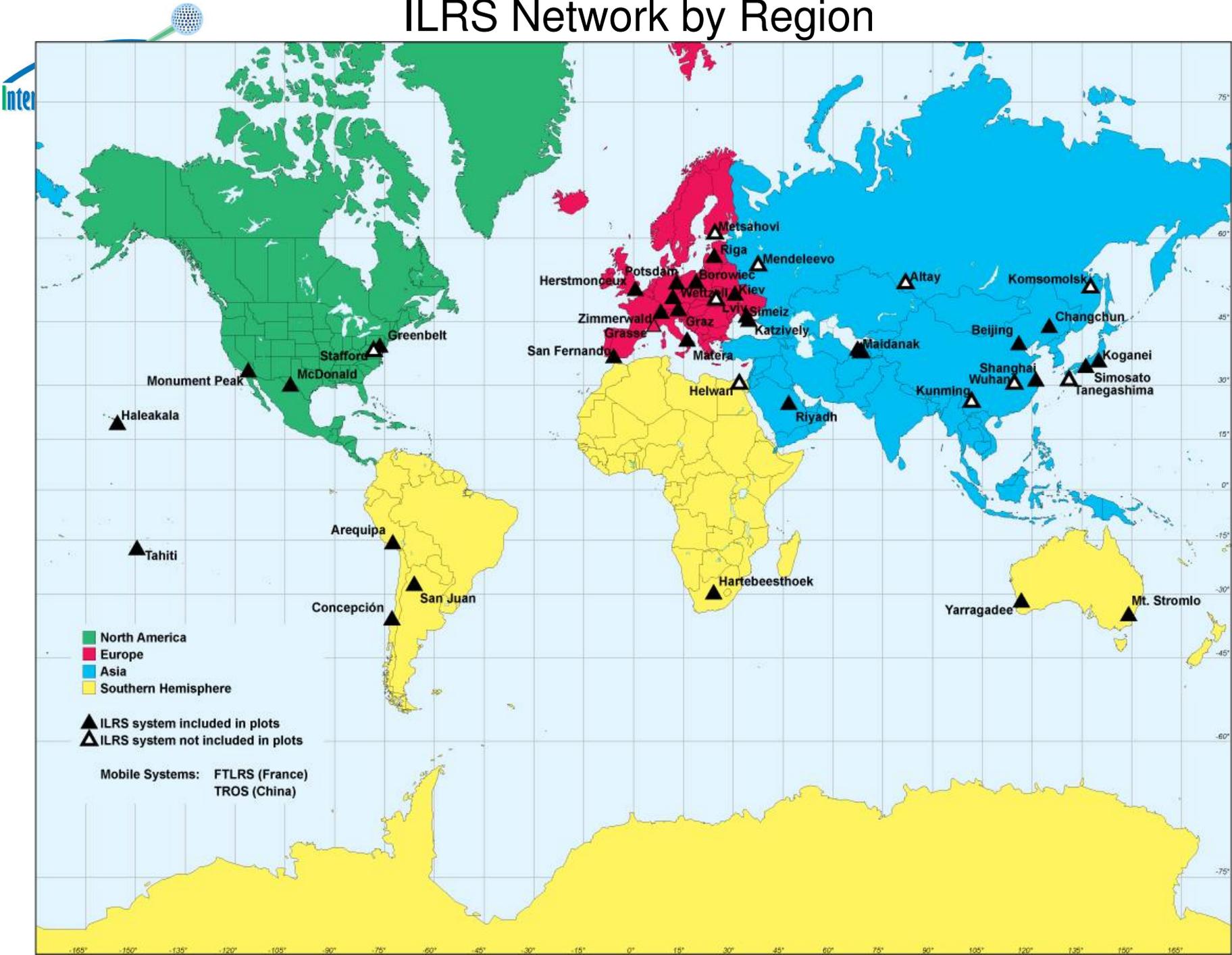
Annual Data Yield



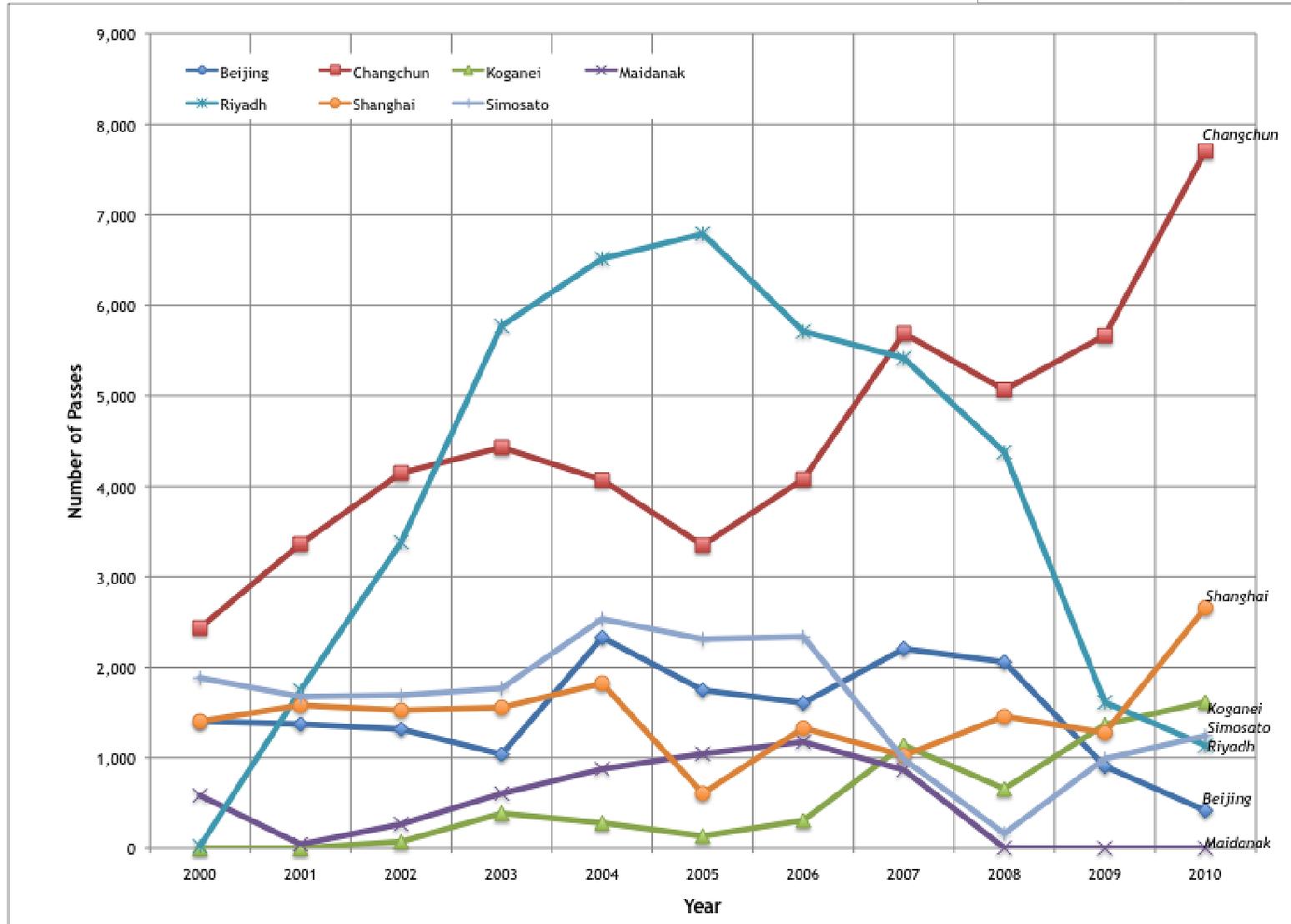
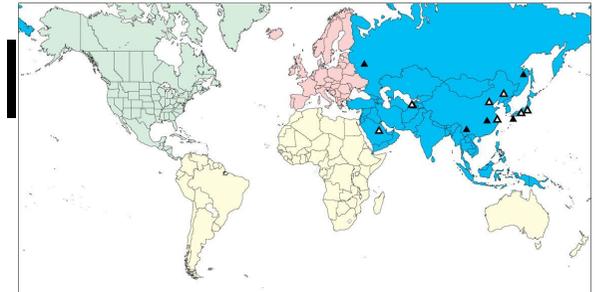
Satellite Tracking (2011Q1)



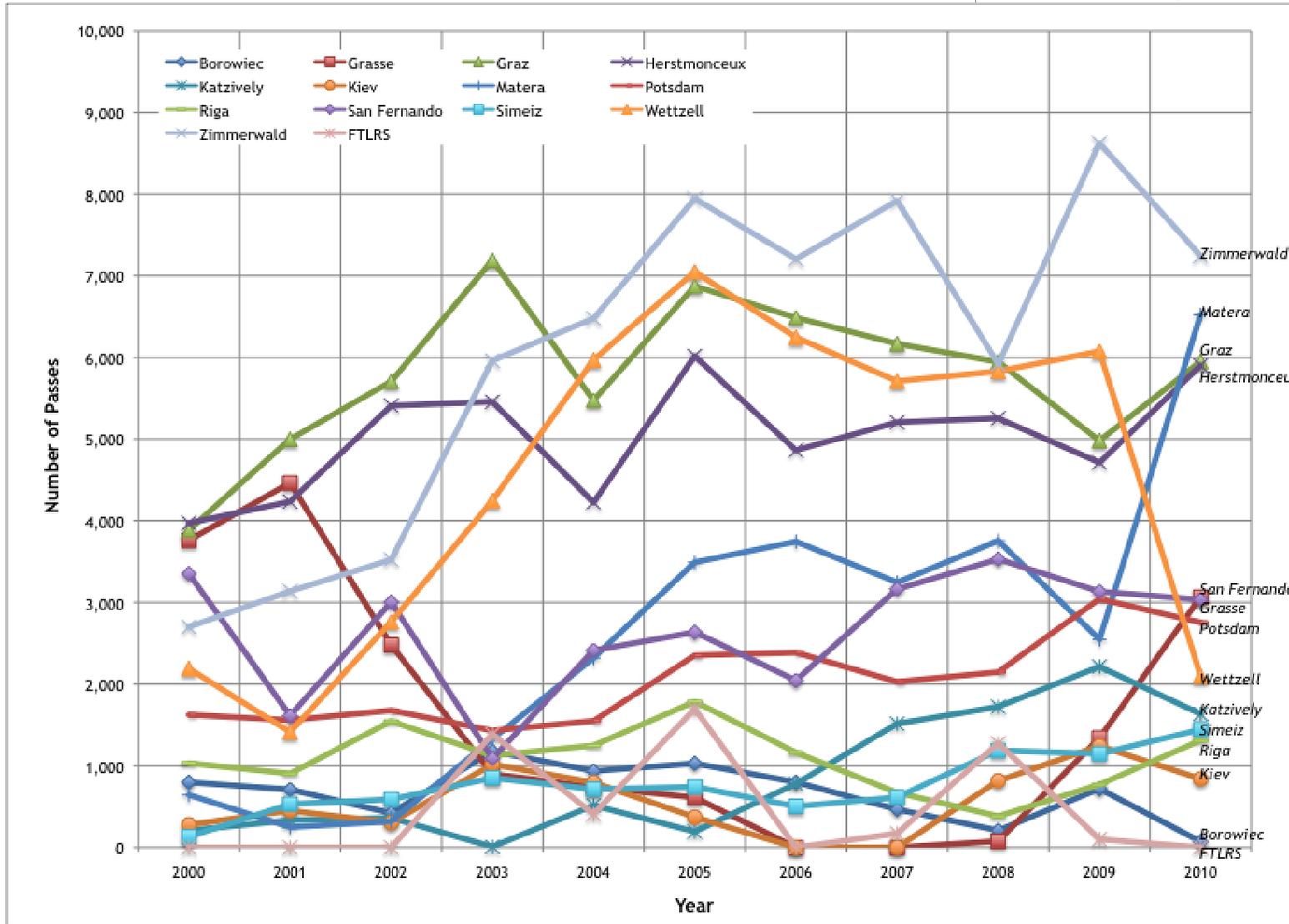
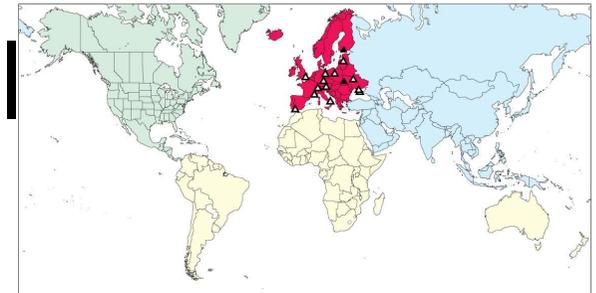
ILRS Network by Region



Yearly Pass Total Asia

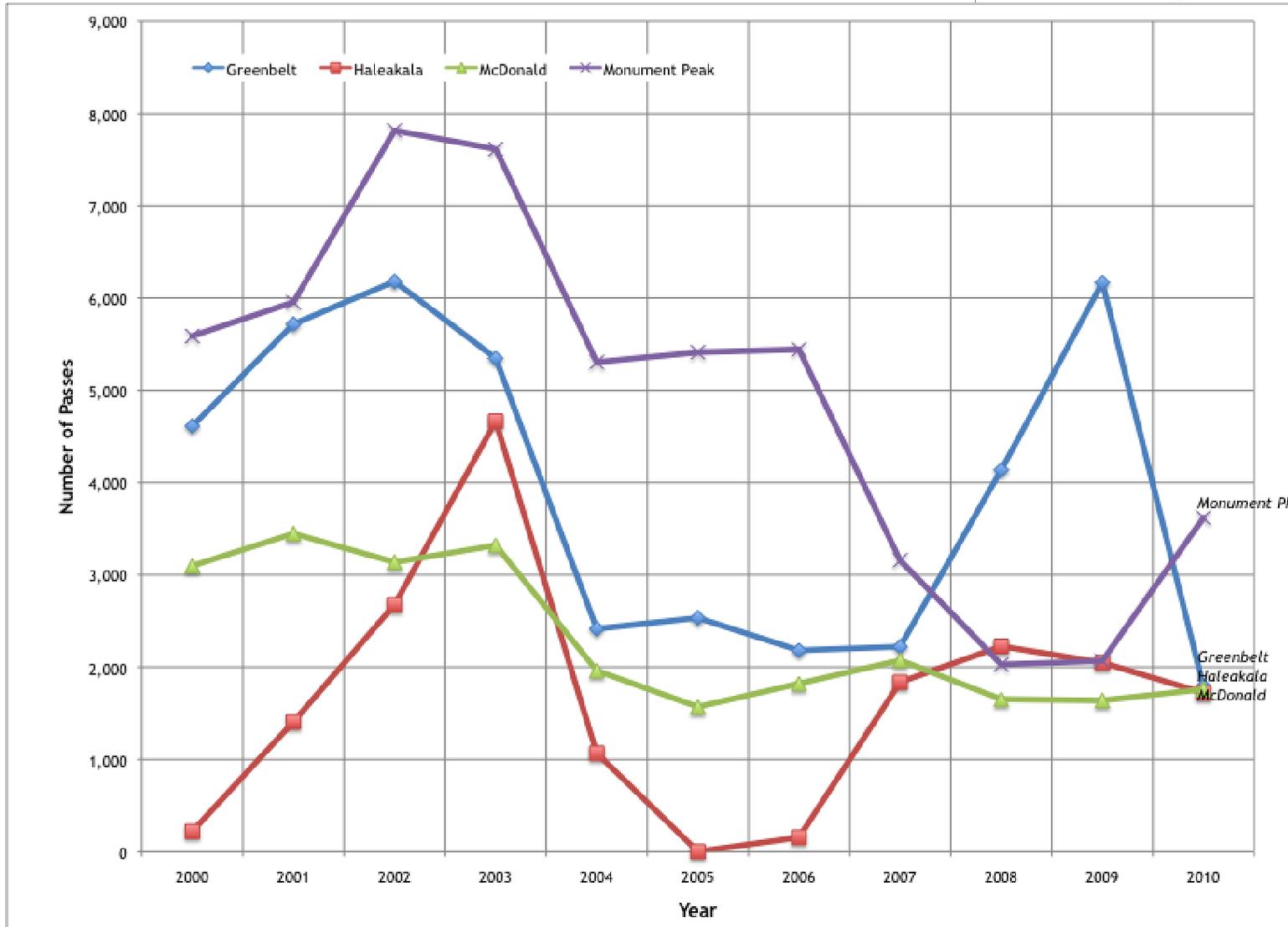
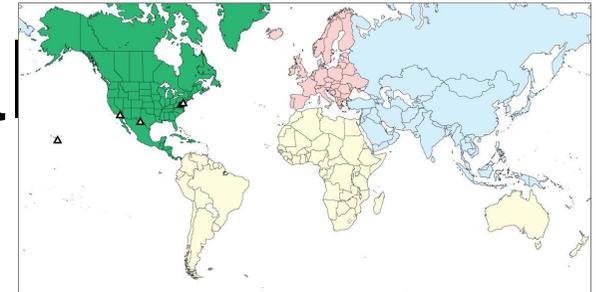


Yearly Pass Total Europe



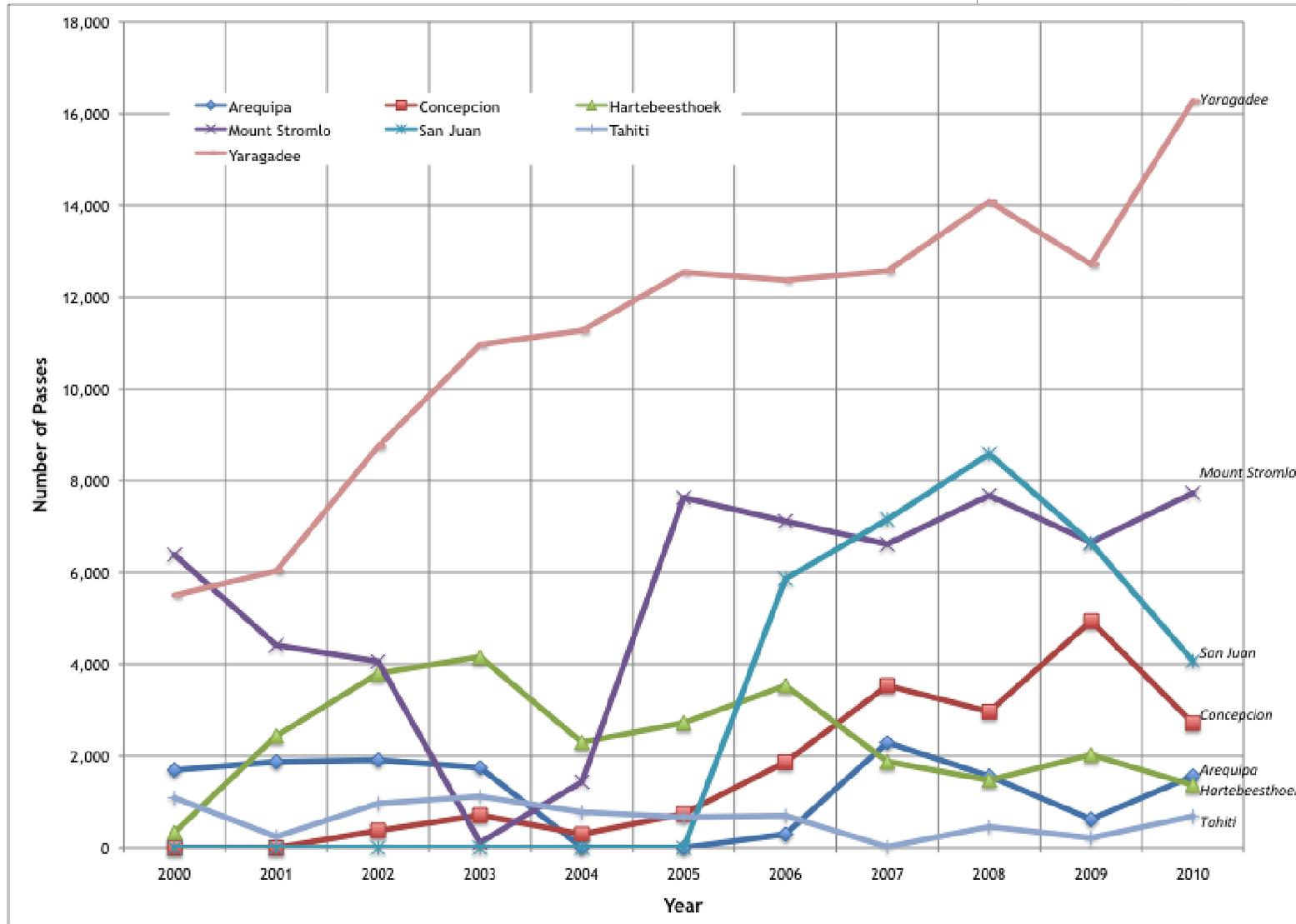
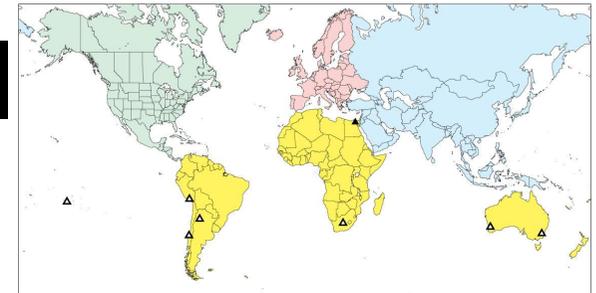


Yearly Pass Total North America





Yearly Pass Total Southern Hemisphere





Laser Ranging Network

- **Many stations do not meet Shanghai criteria (1500/400) set in 1992 (should be set higher)**
- **Severe geographical gaps**
- **Mix of technologies (new verses legacy)**
- **Mix in levels of operations**
- **Downtime due to inadequate spares**

- **Six co-location station with at least 3 techniques; several more being seriously considered**