

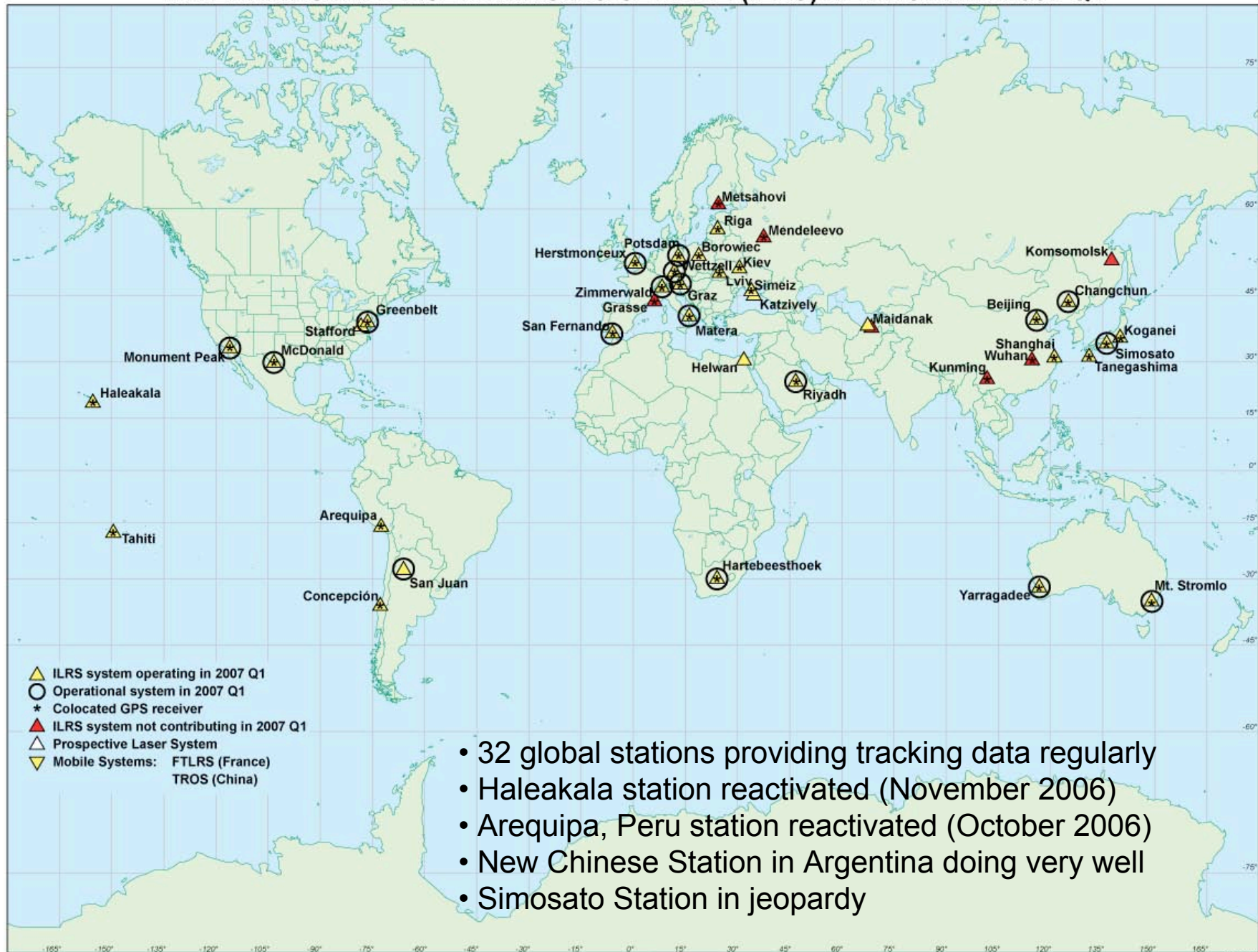
International Laser Ranging Service

Brief for the Meeting of the GGOS
Working Group on Ground Networks
and Communications

April 18, 2007

Vienna

INTERNATIONAL LASER RANGING SERVICE (ILRS) NETWORK IN 2007 Q1



- 32 global stations providing tracking data regularly
- Haleakala station reactivated (November 2006)
- Arequipa, Peru station reactivated (October 2006)
- New Chinese Station in Argentina doing very well
- Simosato Station in jeopardy

Mission Developments

- Missions News
 - ◆ Supporting 26 missions and lunar tracking
 - ◆ New missions supported: GIOVE-A (Galileo), Atmospheric Neutral Density Experiment Risk Reduction (ANDE-RR), geosynchronous Engineering Test Satellite 8 (ETS-8)
 - ◆ ILRS GB approved support of TerraSAR-X, PROBA-2
- GNSS Retroreflector Activities
 - ◆ Dialog continues with relevant agencies on the importance of including reflectors on GPS-III satellites
 - ◆ Specification document for GNSS array created for Governing Board consideration
 - ◆ Study underway at GSFC on hollow cube technology in collaboration with a newly-established testing facility (LNF, Italy)

Analysis Activities

- ILRS official products (station coordinates and EOP) issued weekly
- Seven ILRS Analysis Centers (ASI, DGFI, BKG, GA, GFZ, NASA GSFC/JCET, and NERC) contribute to the official products
- Combination and Combination Back-up Centers at ASI and DGFI
- Analysis of early LAGEOS (1976-1993) data underway for ILRS product submission to the next reference frame
- POD product for geodetic satellites (initially) to be routinely available in mid-2007

Technology

- 2 KHz at Graz station; being implemented at Herstmonceux and on the next generation system at GSFC
- Autonomous at Zimmerwald and Mt. Stromlo stations
- Eye-safe operations and auto tracking (self tracking) being demonstrated at GSFC with the Next Generation SLR (NGSLR, formerly SLR2000)
- Work continues on optical transponders for lunar and interplanetary ranging (LRO-LR)
- 15th International Workshop on Laser Ranging held in Canberra, October 2006