

**ILRS Governing Board Meeting
Eastbourne, UK
October 10, 2005**

Participants: Werner Gurtner, Ulli Schreiber, Georg Kirchner, Graham Appleby, Peter Shelus, Wolfgang Seemueller, Pippo Bianco, Jan McGarry, David Carter, Ron Noomen, and Mike Pearlman.

Outstanding Issues

Pearlman reviewed the progress on outstanding actions items:

1. ILRS Citations
 - a. An ILRS citation for data users has been posted on the ILRS web page;
 - b. Contact has been made with many of the supported satellite missions and they have or are posting ILRS citations on their websites;
 - c. We still have to do outreach to IAG and the journals
2. The scheme for setting priorities dynamically has been implemented;
3. The draft agreement on tracking support for RSA Luneberg retroreflector satellites has been edited by the ILRS;
4. The new tracking procedures on restricted satellites have been implemented at some stations;
5. The data quantity numbers on the Quarterly Report Card have been converted to passes and minutes of data; the CDDIS numbers still need to be converted;
6. The search continues for the early SLR data (1960's – early 1970's)
7. Modeling
 - a. Testing of the new refraction model is underway;
 - b. The satellite center-of-mass web pages have been implemented on the ILRS website; a number of information voids still exist;
8. Ground Surveys
 - a. Final reports from the surveys at Hartebeesthoek, Shanghai, Hawaii, Arequipa and GSFC are still in process;
 - b. The CB is pressing Changchun and Riyadh to redo their ground surveys;
9. Reports
 - a. The 2003/4 ILRS Annual Report is being edited;
 - b. The Proceedings of the San Fernando Laser Workshop are in printing;
 - c. The first two 2005 ILRS Report Cards have been issued;
 - d. New plots on station performance are on the website.

Working Group Reports

Analysis Working Group WG

Ron Noomen reported that BKG has passed the benchmark test and qualified as a contributing analysis center to the ILRS pos+eop combination product. Geoscience Australia and GRGS are also in the process of qualifying. ASI and DGFI are the primary and backup combination centers that provide the combination product to the IERS for incorporation into the ITRF. The first iteration of the ILRS combination solution for ILRS2004 was submitted in late Spring, prior to EGU 2005. With the agreement of Zuheir Altamimi the solution is being reworked to clean up some inconsistencies in station bias treatment identified within AWG. Once the submission for

the ITRF2004 is finished (currently the period from January 1993 onward is covered), the analysis centers will begin the inclusion of earlier data for subsequent ITRF solutions.

It was recommended that we generate an SLR reference frame as an internal ILRS product to provide the best possible set of SLR coordinates aligned with the ITRF. It was also recommended that we develop an “easy to use” list with the key information for each station. Ron Noomen suggested that the eccentricity files may contain all the information for the list.

ACTION: Ron Noomen will examine the issue of the internal SLR reference frame.

ACTION: Ron Noomen will examine the eccentricity files to see if they could serve as a source for the list of key information.

Data Formats and Procedures WG

Stefan Riepl has recommended that the Refraction Study Group be disbanded. The GB left the resolution of the issue up to the Data Formats and Procedures Working Group.

The Prediction Study Group is ready to place the new Consolidated Prediction Format (CPF) into service. Tests at several stations have shown the new format gives considerably better predictions than the IRV's and new programs with targets at extended range are emerging. The GB agreed that the transition should start immediately with a target date for full implementation on June 30, 2006.

ACTION: The CB will contact both the Prediction Centers and the Stations to begin the process.

Networks and Engineering WG

The old laser transmitter from Graz has been given to the Metsahovi station and is being upgraded for 10 Hz. Several stations are now participating in the Engineering Data File (EDF) that has been developed at Riga. The Graz station has been actively involved in helping the Changchun work toward daylight ranging.

Signal Processing WG

The Lageos center of mass correction has been tabulated for all of the network stations.

Transponder WG

The Transponder Ad Hoc Working Group has been formed; the charter and the members are posted on the ILRS website. The Working Group needs to set some specification for stations to follow in their upgrade plans.

Missions and Campaigns

Cryosat is scheduled for launch on October 8. Galileo v2/A and v2/B are scheduled for launch on December 20 and late January respectively. GP-B is nearly out of liquid helium, and a decision is imminent on a continuation experiment. The GB awaits a recommendation from the Missions Working Group on ANDE and OICETS.

The ALOS launch has been delayed. Tracking is scheduled to start 90 days after launch but the updated schedule and the station qualifying procedure is not clear.

ACTION: Werner Gurtner will write a letter to Hiroo Kunimori to ascertain the ALOS status and planned procedures.

The SLR aspect of the CONT05 Campaign was conducted through the month of September. The stations surpassed the September 2004 data yield on GPS and GLONASS by about 50%.

Galileo Service Provider

A number of institutions are partners in the Global Galileo Service Provider (GGSP) which will provide the interface between the Galileo project and the Geodetic Services. The operational bodies of the Galileo Project will not have communication with the outside world, so it is through the GGSP that all communication, requests, campaigns, reference frame development, flow of predictions and normal points, etc. will flow.

GGOS

Activities are underway to get GGOS integrated with several international science and political activities. A GGOS website has been established at: <http://www.ggos.org/>. A draft plan was accepted by the IAG Steering Committee in Cairns in August. Marcus Rothacher replaces Chris Reigber as GGOS Chair; Ruth Neilan and Hans-Peter Plag were appointed as Co-chairs.

The Ground Networks and Communications Working Group has been active. Two poster papers were presented at IAG in Cairns:

- M. Pearlman, et al, "GGOS Working Group on Networks, Communication, and Infrastructure" (http://cddis.gsfc.nasa.gov/docs/GGOS_IAG_0508.pdf)
- M. Pearlman, C. Noll, W. Gurtner, R. Noomen, "The International Laser Ranging Service and its Support for GGOS" (http://cddis.gsfc.nasa.gov/docs/ILRS_IAG_0508.pdf)

Simulations toward network design activities have started. The first report from the Working Group due at EGU in April.

SLR Planning Document

It has been suggested that we should write an SLR planning Document similar to that developed by the VLBI community (VLBI 2010).

ACTION: Mike Pearlman will circulate a copy of VLBI 2010 to the GB members.

Other Items

Zuheir Altamimi, Erricos Pavlis, Frank Lemoine, John Ries, David Carter, and Mike Pearlman visited Geoscience Australia (GA) in late August to give a series of talks on SLR and its applications, and to meet with GA officials to discuss the international space geodesy program.

Next Meeting

The GB will meet at EGU in Vienna in April. If a sufficient number of members plan to attend AGU in San Francisco in December, an informal GB meeting will be held there also.