



Reports from the AC and CC:

ASI (AC):

- Comparison of the ASI solutions with the old and new CoM corrections: less than one millimeter difference in the arc residual wrms for all the satellites. At the station level, the differences are higher for Etalon.

ASI (CC):

- Test on the new CoM: comparison of site coordinates, EOPs and translations of the two solution time series. The adoption of the new model has a modest impact, difficult to measure on the combined solutions.

BKG:

- Pointed out the need to QC the CRD data better and to investigate alternate approaches in combining the AC products

DGFI:

- Submissions restarted since late Sept. 2011, difference in WRMS agreement of the DGFI contribution to ILRS-A and ILRS-B
- New DOGS5.2 ready to be implemented (close to 5.0) since CRD can be read-in directly in this version
- Still using old interpolation technique for EOP
- Application of the new CoM model done as station corrections resulted in an overall difference between the two series in 3D station coordinate differences of slightly over 1 cm! Sees similar and larger differences comparing ILRS-A and ILRS-B

ESA:

- Still working on S/W update for gravity coefficients estimation.
- Etalon Radiation pressure study to look for model improvement for GNSS.

GRGS:

- Products delivered for all required series now
- IERS2010 compliance in GINS but not entirely in inversion s/w (?)
- Comparison of standard and new CoM model in residual space showed no clear response (NB: some of the slides shown seem to have the wrong axes labels)

GFZ:

- Brief verbal report: all series regularly delivered and ready for all future PPs

#### JCET (AC&CC):

- Station validations for Arequipa, Monument Peak, Beijing done; for the new Russian stations tests are in progress.
- CRD validation of all Russian data from all stations (using the exact same s/w).
- Data flow: tables of data available at the data centers for the last 8 days, compared daily, indicate that the 2 centers are aligned except for the data on the last day (which is natural as that data are still “in flow”).
- Atmospheric de-aliasing application tests using Jean-Paul Boy’s ECMWF-based corrections for loading and gravity in Geodyn; GGFC model to be soon available in Geodyn format also. Test series 2005-2011 to be done by July 1, 2012.
- Present analysis showed very small effect on resulting station positions
- Tests with the new CoM model for 1993-2011 indicate no significant improvement in the resulting station positions.

#### NSGF:

- AWG pilot on CoM corrections, results show small systematic change in scale (~0.4 mm) but no conclusive indication that new model is better or correct
- Updates of SATAN to apply APL using the Vienna APL V2 product, still no gravity corrections, no news on the LOD problem and no SP3c capability yet

#### IFE/LLR:

- Statistics of the data acquired for each lunar retroreflector array.
- Status report, APOLLO site data for recent years not released yet

#### New CoM model:

The results shown during the AC reports indicate that major benefits of the new CoM model cannot be seen at the moment. The adoption of the model is now postponed until further testing is done. Nevertheless, new CoM tables will be available in the next months to include the new stations. CoM tables will be stored at the DC, and each update will have an increased version number. A link in the “Data Handling” file will be inserted.

#### Non-tidal atmospheric loading corrections (Altamimi):

- As decided at the last UAW, the loading model will be tested in order to clarify the benefit and decide whether or not it will be applied for the next ITRF. A call for participation has been issued (available on the GGFC website and emailed to all on the AWG mailing list) and solutions from the services are expected by July 1<sup>st</sup>, 2012. The model to be tested is preferably the one provided by Van Dam at the GGFC website; Analysis Centers using a different model need to submit the differences of their model with respect to the one requested.
- ILRS will submit the time series of combined solutions, with and without the model. All the ILRS ACs are invited to submit their series to the CC as version 40 (for the standard) and 45 (for the solutions with the new model) by the end of May. A separate hidden directory was generated for this PP at EDC and CDDIS for the v40 and v45 series:

for CDDIS:

<ftp://cddis.gsfc.nasa.gov/pub/slr/products/test/ncep/>

for v45

<ftp://cddis.gsfc.nasa.gov/pub/slr/products/test/weekly/YYMMDD>

for v40

and for EDC:

<ftp://edc.dgfi.badw.de/pub/slr/products/test/ncep/>

for v45

<ftp://edc.dgfi.badw.de/pub/slr/products/test/weekly/YYYYMMDD/>

for v40

**Note that thanks to the synchronization of the two DCs, the structure/path are identical!**

- At least 5 ILRS ACs already accepted to submit series for this PP.

ITRF (Altamimi): Next single service solution for ITRF should be ready by the end of 2013, IGN will start the combination in 2014.

SLRF2008: old sites to be improved and new sites to be added in a combined effort from ASI, DGFI and JCET.

CRD format: data in the new format will be used starting on May 2<sup>nd</sup>, 2012. Data from a few non-compliant stations are converted to CRD at the Operational Centers. The first daily solution with the CRD data will be delivered on May 3<sup>rd</sup> and first weekly solution on May 9<sup>th</sup>.

ORBIT

- ASI CC: the new orbit files are submitted by the ACs in the frame SLRF2008 since November 2011. Comparisons have been made for one week only (week 120310). GFZ ETALON orbits are not available. ASI, BKG and GFZ orbits are coherent with roughly 3 cm rms of the orbit differences in LAGEOS along and cross-track, 15 cm for ETALON. DGFI orbits differ about 15 cm from the previous three for LAGEOS; 50 cm for ETALON. JCET orbits show problems, probably in the reference frame.
- JCET CC: comparison of the AC weekly orbits with the combined ILRSB orbit.

Station performances (H. Mueller):

- Data Handling: recently updated, more frequent updates needed.
- The Rapid Service Mail seems to be very useful to alert the station and sometimes quickly resolve problems before the data enter major analysis products.
- The new Russian stations are working well.
- Over the past months many stations have been quarantined for several months. Stations should be convinced to adhere to the quarantine procedure when they have a major upgrade or failure. A possible solution could be the quarantine for those stations not delivering data for quite a long period (**NB: 90 days adopted at the DF&P WG**). The station should be informed and the quarantine removed in case of maintenance not affecting the data quality or after the data are AWG-qualified in case of station upgrades.

ILRS product plan evolution (ECP):

- New CoM adoption: not adopted at the moment, **v35 to continue production for further testing**. Sensitivity analysis will be done on a voluntary basis (e.g. adding 1 cm to the CoM correction and see if it is recoverable from the analysis).
- The daily solutions will become the official product without modeling changes from the way it is produced now. The production of the v30 weekly solution will be renamed on May 2, 2012 to v40. The daily products (v130) will now be publicly available from:

- from CDDIS: <ftp://cddis.gsfc.nasa.gov/pub/slr/products/pos+eop>
- from EDC: <ftp://edc.dgfi.badw.de/pub/slr/products/pos+eop>

and under these each day a new subdirectory "YYMMDD" will be holding all the files from all ACs and CCs for that date. After the end of a full year, the DCs will collect these subdirectories in an "annual" directory "YYYY" for easy search and access. Products prior to 120501 will remain under the hidden "test" directory (not to be released to public).

- The weekly solution will be used from now on as a standard to test the series that will include the atmospheric loading (v45), later on the PP product for low degree harmonics. In the future, as decided in Vienna, the weekly product will become the official product with a higher latency, 10-15 days, and it will contain the 2x2 gravity field estimates and the atmospheric loading and gravity model corrections.
- ACs are asked to check the adherence to IERS Conventions 2010 and to document what they are doing differently. This activity will presumably be done after this summer. **GRGS and ESA SINEX files will include the description of the used models, as done by all the other ACs up to now.**

JoG special issue (ECP):

- Two papers requiring abstracts and writing teams still to be defined.

**Next AWG meetings:**

**1) Fall meeting, on Saturday, November 3, 2012, at the technical workshop in Frascati, Italy**

**2) Spring meeting on Sunday, April 7, 2013, prior to the 2013 EGU in Vienna, Austria.**

**ACTION ITEMS SUMMARY:**

**AI: ALL, on May 2 switch to CRD data format and DAILY series become official product**

**AI: ALL, continue the v35 series to help validate the new CoM model**

**AI: ALL, rename your weekly series to v40 (from v30) and continue to deliver routinely**

**AI: ESA & GRGS ACs should update their description file and include it in their sinex files**

**AI: submission with the new CoM model to be continued for further testing (v35)**

AI: ECP will distribute the GFZ and JCET APL file documentation to the AC

AI: Daniela Thaller will send information on SINEX formatting to the Analysis Centers

AI: AC should submit orbits with SLRF2008 and EOP fixed starting from the first submission in November 2011.

**AI: ESA AC needs to implement the gravity coefficient parameter estimation.**

**AI: NSGF AC needs to implement the APL gravity correction coefficient application.**

**AI: GA and TO will develop updated CoM tables and will deposit them at the DCs.**

**AI: HM will update the Data Handling file to include an entry for the current CoM model.**

## List of attendees, AWG @ TU Wien, Spring 2012 (April 21)

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