Annex 1 Programme of the Workshop

MONDAY – NOVEMBER 18:

08:00 – 09:00 Registration
09:00 – 09:30 Welcome and general remarks
09:30 – 10:00 Introduction (Rothacher)
10:00 – 10:30 *Break*

Combination Strategies and Issues for TRF / CRF / EOPs:

10:30 – 12:00 ***Part 1:*** Combination of station coordinates, velocities, local ties, datum definition, non-linear motion (Altamimi / Boucher / Drewes / Ferland)

- 10:30 Position Paper (Z. Altamimi, IGN)
- 10:50 ITRF WG status/views (K. Larson, Colorado Univ., presented by J. Ray)
- 11:00 ITRS Center status/views (C. Boucher, IGN, presented by Z. Altamimi)
- 11:10 Remarks on some general problems in the combination of station coordinate and velocity solutions (H. Drewes, DGFI)
- 11:20 TRF combination at NRCan; Status report (R. Ferland, NRC)
- 11:30 Discussion

12:00 – 13:30 *Lunch*

13:30 – 14:20 ***Part 2:*** Celestial reference frame issues (Souchay / Ma)

- 13:30 Introduction on the Position paper (J. Souchay)
- 13:40 The status of the ICRF (C. Ma)
- 13:55 Internal consistency of the celestial reference frame based on time stability (M. Feissel-Vernier)
- 14:10 Discussion

14:20 – 15:50 ***Part 3:*** Combination / comparison of EOPs (xp, yp, UT1/LOD, nutation), subdaily EOPs, impact of IAU Resolutions (Gambis / Vondrak)

- 14:20 Position Paper (D. Gambis, J. Vondrak)
  EOP Combinations:
- 14:35 D. Gambis, Earth Orientation Center
- 14:50 T. Johnson, Rapid Service/Prediction Center
- 15:05 R. Gross, JPL
- 15:15 J. Vondrak, AICAS
- 15:25 Discussion

15:50 – 16:15 *Break*

16:15 – 17:30 ***Part 4:*** EOP Alignment Campaign, IGS / IVS / ILRS combinations, systematic errors (Nothnagel / Dill)

- 16:15 Introduction to session (A. Nothnagel, R. Dill)
- 16:20 Comparisons of IGS EOP series contributed to IERS Alignment Campaign (R. Ferland)
- 16:35 EOP Combination within IVS: Status and Problems (A. Nothnagel and C. Steinforth)
- 16:50 Comparison of EOP series from the IERS analysis campaign to align EOPs to the ITRF2000/ICRF (R. Dill)
- 17:05 Evolution of consistency between EOP series and reference frames (D. Gambis, C. Bizouard, T. Carlucci)
- 17:20 Discussion

TUESDAY – NOVEMBER 19:

Issues of a Rigorous Combination (Coordinates + EOPs (+ CRF), and Other Parameter Types):

09:00 – 10:00 *Part 1:* Conventions and models for a rigorous combination, consistency aspects, systematic errors (McCarthy / Petit)

- 09:00 Status and Future of the IERS Conventions (D.D. McCarthy, G. Petit)
- 09:15 Impact of IAU Resolutions on EOPs (N. Capitaine)
- 09:35 Discussion

10:00 – 10:30 *Break*

10:30 – 12:00 *Part 2:* Aspects of a rigorous combination, combination of several parameter types, different combination levels (Ray / Zhu)

- 10:30 Position Paper and discussion (Jim Ray, NGS)
- 11:00 Combination of multi-satellite techniques at the observation level (Sheng-Yuan Zhu, GFZ)
- 11:15 Program and first results at GRGS in the framework of CRC (Richard Biancale, GRGS)
- 11:30 Systematic differences in individiual solutions and IERS products (Zinovy Malkin, IAA)
- 11:45 Numerical aspects of combination at the observation equation and normal equation level (Michael Gerstl, DGFI)

Lunch

13:30 – 15:30 *Part 3:* SINEX Combination Campaign (Angermann / Thaller / Rothacher)

- 13:30 Presentation of Position Paper (D. Angermann, D. Thaller)
- 14:00 Multi-technique combination of time series of station positions and Earth orientation parameters (Z. Altamimi, C. Boucher)
- 14:15 Combination of loosely constrained solutions (G. Bianco, R. Devoti, V. Luceri)
- 14:30 First Results at NRCan for the IERS SINEX Combination Campaign (R. Ferland)
- 14:45 Rang defect analysis and variance component estimation for inter-technique combination (R. Kelm)
- 15:00 Discussion

15:30 – 16:00 *Break*

16:00 – 17:30 Final discussions / conclusions

WEDNESDAY – NOVEMBER 20:

08:30 – 09:15 GGFC overview (Chao)

09:15 – 10:45 Special Bureau for the Atmosphere (Salstein)

- 09:15 Update of the SBA (D. Salstein)
- 09:30 Atmospheric loading effects on Earth's time-variable gravity (J.-P. Boy and B.F. Chao*)
- 09:45 Reliability of atmospheric torque for geodesy (O. de Viron* and V. Dehant)
- 10:00 Atmospheric excitations of the Chandler wobble estimated from ECMWF reanalysis datasets (I. Naito, Y. Aoyama*, T. Iwabuchi and N. Yamazaki)
- 10:15 Time variable atmospheric and oceanic signals in excitation functions of polar motion (J. Nastula*, D. Salstein, and B. Kolaczek)
- 10:30 Discussion

10:45 – 11:15 *Break*

11:15 – 12:30 Special Bureau for the Oceans (Gross)

- 11:15 Comparison of Oceanographic Signals with SLR-Derived Gravity Observations (C. Cox* and B.F. Chao)
- 11:30 Oceanic Excitation of Polar Motion and Nutation: An Overview (A. Brzezinski)
- 11:45 Possible Role of Oceans in Variations of Length-of-Day at High Frequencies (T. Johnson)
- 12:00 The IERS Special Bureau for the Oceans: Past Progress and Future Plans (R. Gross)
- 12:15 Discussion

12:30 – 13:45 *Lunch*

13:45 – 15:00 Special Bureau for Hydrology (Wilson)

- 13:45 SBH goals and the SBH Website (C.R. Wilson)
- 13:55 New directions and capabilities in hydrologic land surface models (M. Rodell via C.R. Wilson*)
- 14:05 Future plans for satellite remote sensing capabilities of the hydrologic cycle (D.E. Alsdorf via C.R. Wilson*)
- 14:15 Using space geodesy to constrain global loads (P. Clarke)
- 14:30 Recent hydrology studies at GSFC (B.F. Chao* and A.Y. Au)
- 14:45 Discussion

15:00 – 16:15 Special Bureau for Gravity / Geocentre (Watkins / Gruber)

- 15:00 SBGG status and prospects (M. Watkins via T. Gruber*)
- 15:15 Using future observations for time-variable gravity work (T. Gruber)
- 15:30 Recent SLR results (C. Cox* and B.F. Chao)
- 15:45 Short-time atmosphere and ocean de-aliasing for GRACE (F. Flechtner)
- 16:00 Discussion

16:15 – 16:45 *Break*

16:45 – 18:00 Special Bureau for Tides (Richard Ray)

- 16:45 Overview of SBT, issues and plans (R. Ray)
- 17:15 Recent work on theoretical modeling of nutation (J.M. Ferrandiz Leal)
- 17:30 Oceanic tidal torque on the solid earth (O. de Viron*, J.-P. Boy)
- 17:45 Discussion

THURSDAY – NOVEMBER 21:

08:45 – 10:00 Special Bureau for Mantle (Chao)

- 08:45 SB Mantle status and plan (B.F. Chao)
- 09:00 On the secular drift component of global Earth deformation (E. Ivins)
- 09:15 Co-seismic Excitation of Earth Rotational and Gravitational Changes (B.F. Chao* and R. Gross)
- 09:30 Geophysical Inverse Solutions Using Long-Term SLR-Derived Gravity Rates (C. Cox* and B.F. Chao)
- 09:45 Discussion

10:00 – 10:30 *Break*

10:30 – 11:50 Special Bureau for the Core (Van Hoolst)

- 10:30 SBC overview (T. Van Hoolst)
- 10:50 Core mantle interactions (V. Dehant*, D. Jault, S. Ponsar, T. Van Hoolst)
- 11:10 Geodynamo modeling, core-mantle interactions, and Earth rotation variations (W. Kuang)
- 11:30 Discussion

11:50 – 13:00 *Lunch*

13:00 – 14:15 Special Bureau for Loading (Van Dam / Plag)

- 13:00 SBL Introduction (T. van Dam)
- 13:05 Status of loading predictions (Earth Model, Model Surface Loads, Theory, Numerical Tools) (P. Gegout)
- 13:25 Products of the SBL (Predictions, Research Products, Operational Products (H.-P. Plag)
- 13:40 Validation of loading predictions (Intercomparison, comparison with observations) (T. van Dam)
- 14:00 Discussion

14:15 – 15:00 Poster summary, remaining scientific discussions

15:00 – 15:30 *Break*

15:30 – 17:00 Interactions and support (various, all) IERS Product Centres – GGFC, CRC-GGFC (Chao / Rothacher / Zhu)