

Unified Analysis Workshop 2009

Date: December 11, 2009, 09:00 – December 12, 2009, 18:00

Location: Gran Hyatt, San Francisco

Status of action items:

- green date: done

- blue date: not due yet, in progress

- red date: deadline reached

Last update: February 23, 2010

Action Items

AI	Description	Responsible	Deadline
1	Send the action item list to all participants	M. Rothacher	14-DEC-09 done
2	Make all presentations and position papers of the UAW 2009 available on the IERS web pages	IERS CB	23-DEC-09 done
3	Make list of all action items and recommendations of the UAW 2009 available on the IERS web pages	IERS CB	23-DEC-09 done
4	Benchmarking of diverse models in the software packages, that are common to all techniques.	Lead: T. Springer	15-FEB-10 reminder sent
4a	A list will be put together with priorities and a first set of benchmark tests will be made available. In general: technique-specific effects should be checked by the technique services, common models should be checked on the IERS/GGOS level.	T. Springer	
5 5a	SINEX format update (Version 2.10): Distribute new version 2.10 of the SINEX format containing: - Reference frame block (mandatory) - Header line "Solution content": allow "X", "X V", "V" (description) - Information on time system (Urs Hugentobler) - Discontinuities block to be made official - Metadata block (mandatory; defined by IERS CB) - Extended parameterization (optional); important also for IERS WG on Combination - GLONASS receiver phase center corr. block (mandatory). Galileo is already in. Note: LAT/LON/HEIGHT coordinate representation will not be included in SINEX for the time being. It can be discussed again	M. Rothacher, D. Thaller	31-JAN-10 in progress

5b	in the IERS WG on SINEX to be created. Make new description available at IERS web pages and distribute it to all analysis centers	IERS CB	31-JAN-10 waiting for 5a / 5b
5c	Implementation of mandatory blocks by the Analysis Centers and Combination Centers	All ACs	30-APR-10
6	IERS Working Group on SINEX: Create an IERS WG for the maintenance and updating of the SINEX format. Some of the tasks (to be described in more detail in the IERS WG charter): - Inclusion of satellite antenna PCV parameters - Documentation of models and procedures used by the ACs - New layout of SINEX format description - ... Members of the IERS WG: All Analysis Coordinators, ITRF CC. Proceed according to the setup of IERS WGs.	IERS ACoo	31-MAR-10
7	Data base of daily SINEX files from reprocessing activities:		
7a	Prepare short guidelines for the submission of daily SINEX files.	IERS ACoo, C. Noll	15-JAN-10 in progress
7b	All freely available daily SINEX files from reprocessing efforts are to be collected in a data base. ACs are encouraged to submit their daily SINEX files to CDDIS (and IERS).	All ACs (ESA, GGOS-D, IGN, ...)	28-FEB-10
9	Troposphere Combination Campaign:		
9a	Test daily SINEX file generation with troposphere parameters for the CONT'08 campaign time interval. Afterwards combination tests. If possible, the following standards should be used: - GPT for the a priori hydrostatic zenith GMF dry for hydrostatic a priori delay - GMF wet for troposphere parameter estimation - 2-hour resolution - Piece-wise linear parameterization using the new SINEX version 2.10 - At least co-location sites should be included. - Binning of troposphere parameters to integer hours - Daily gradients represented as piece-wise linear with zero a priori values	Lead: R. Heinkelmann ESA: GNSS, DORIS; TUM: GPS; IGN?: DORIS; ASI?: VLBI; DGFI (Comb); ETHZ (Comb.)	31-OCT-10
10	Subdaily piece-wise linear ERPs: Work towards a subdaily resolution and a representation of parameters by piece-wise linear offsets (instead of offsets and rates):	Lead: M. Rothacher	
10a	Generate daily SINEX files for the test period of CONT'08 with: - 1-hour resolution of ERPs - Piece-wise linear ERPs (using the new	ESA, IGGB, TUM, GRGS, GSFC (MacMillan)	30-JUN-10

10b	SINEX format version) - If possible, contribute the same daily SINEX files with offsets and rates ITRF CCs and other combination groups test the combination based on the new (and old) representation	ITRF CC, others	30-OCT-10
12	IERS WG on Parameterization and Modeling for IERS201x (ITRF/EOP/ICRF): WG to discuss and converge on specifications for IERS201x, e.g.: - Common ERP parameterization for all techniques - Add quasar coordinates to the SINEX files (to be discussed in IVS) - Add nutation to the SINEX files - Add low-degree harmonics of the gravity field to SINEX files (to be discussed by ILRS, next AWG Meeting) - Mapping Functions ? - Atmospheric loading ? - Other loading effects ? - Seasonal signal treatment ? etc. Members: All ACoo, ITRS PC/CCs, EOP PC, ICRF WG Chair, Combination WG Chair. Prepare charter etc. according to IERS ToR.	Lead: open M. Rothacher All services IVS IVS ILRS/IDS	31-MAR-10
13	Documentation of AC modeling and parameterization standards:	GGOS BSC (U. Hugentobler)	28-FEB-10
13a	Generation of a unified form for the description of AC standards, models parameterization. (Check also standards sheet by GGOS-D for completeness) and distribution to all ACs.	GGOS BSC	
13b	Comments by Technique Analysis Coordinators	Analysis Co	15-MAR-10
13c	Form distributed to all ACs (or make a internet version ?).	GGOS BSC	15-APR-10
13d	Forms filled and returned by all ACs	All ACs	31-MAY-10
13e	Start the homogenization of the models and parameterizations	GGOS BSC	31-MAY-10
14	Reference pressure for atmospheric loading:		
14a	Get the information on reference pressure fields used by the different loading centers.	T. van Dam	31-MAR-10
14b	Additional test to be done to see the differences between different approaches. Distribute short report before EGU 2010. Agree on a reference pressure field.	H. Schuh, D. MacMillan	07-APR-10
14c	Report to the IERS Conventions PC for inclusion into the conventions.	All (at EGU 2010)	03-MAY-10
14d		H Schuh	10-MAY-10
15	Apply atmospheric loading on the observation level: Is atmospheric loading to be applied on the observation level for next reprocessing ? Prepare a short report on the different atmosphere loading series.	T. van Dam	07-APR-10

	Agree on a unique loading series for the correction. Decision on how to apply the atmospheric loading (observation or solution level) should be up to the new IERS WG on IERS201x standards.	All (at EGU 2010)	03-MAY-10
16	Subdaily ERP tidal model: The model for subdaily ERP tidal terms is not of sufficient accuracy anymore. Libration is not correctly handled at present. Should a empirical tidal model estimated from GPS and VLBI data be used ? Collect good empirical subdaily ERP tidal models (GPS, VLBI, combined, ...) and compare the models with most recent models from Richard Ray. Check the spectra in ERPs. Advantages/disadvantages of empirical (GPS/VLBI) and altimetry models ? Perform test over a limited time period with the most promising models. Make a recommendation for the model to be used in future.	Lead: P.Steigenberger P. Steigenberger, J. Gipson, D. MacMillan, N. Panafidina, T. Artz, S. Böhm, R. Ray, R Gross (see above) (for EGU 2010)	31-MAR-10 15-APR-10 03-MAY-10
17	Combination of SLR Range Biases: SLR range biases could be combined at the ILRS Combination Centers. This would improve the consistency of the combined solutions of the ILRS Combination Centers. This is just a recommendation.	ASI, DGFI	Open
18 18a 18b	EOP Parameterization: Recommendation to have consistent parameterization (daily offsets and rates) for the weekly SINEX files for all techniques. Parameterization of Nutation (de, dpsi → X,Y): Recommendation to start to move towards X,Y parameterization	IDS, ILRS (for the next ITRF realization) All ACs	Next ITRF realization open
19	Solar Raditation Pressure Models: Solar radiation pressure modeling and parameterization is a crucial issue not only for GNSS but also for other satellites. A common effort to solve this problem should be initiated (e.g. with GNSS and JASON-1). No detailed plan exists yet.	ACs	open
20 20a 20b	SLR Tracking of GLONASS: Recommendations whether to get a lot of observations for a few satellites or to get few observations for a lot of satellites. Simulations necessary. Collect information on GLONASS retro-reflectors.	T. Springer, G. Appleby ILRS	31-DEC-10 31-DEC-10
21	Meteorological data equipment / instrumentation coordinator, technique-independent part → to be discuss at the next meeting of the GGOS Bureau on Networks and Communication	GGOS BNC (Mike Pearlman)	16-DEC-10
22	Survey what people want to have as	GGOS Portal	GGOS

	products. To be discussed at the GGOS Retreat in February 2010 in Miami.		Retreat
	General Remarks		
	Position Paper should be prepared well ahead of time for the next UAW workshop		
	GGOS SC should motivate participation from gravity and from IGS		
	UAW 2011 will be at ETH Zürich, Switzerland		