

Roadmap for ITRF2020

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Key points

- **Recall of the Background/History**
- **Current status per Technique Center**
- **Call for Participation**
- **Summary and pending points**
- **Schedule and time-line**

Roadmap for the next ITRF solution: ITRF2020

- Consultation was sent to the technique ACCs and GGFC on January 24, 2018 ==> ITRF2020
- An inventory (list) of all effects and model updates to be considered by all and individual techniques in the reprocessing effort

IVS

- **IVS: Response from John Gipson:**
 - General agreement, except:
 - **HF-EOP model to be recommended by the WG**
 - Atmospheric Loading model (ATML) will be applied!!
- **Contribution of the ATML corrections to the right-hand side of the normal equation must be provided in the SINEX, i.e. $A^T P \cdot (\delta Y_{ATML})$**
 - High priority to updating software to apply gravitational deformation.
- **IVS time line for reprocessing:**
 - No major obstacle

ILRS

- **ILRS: Complete :**
 - Mostly agree on ITRS proposal
 - Gravity field model, compatible with linear pole model
 - **HF EOP: awaiting for a “consensus” model**
 - Will **not** include a loading model
- **ILRS time line for reprocessing:**
 - Reprocessing may start end 2019, beginning 2020

IDS

- **IDS: Complete:**
 - Mostly agree on ITRS proposal
 - **HF EOP: awaiting for a “consensus” model**
 - **A number of DORIS-specific effects will be addressed**

- **IDS time line for reprocessing:**
 - **IDS AWG meeting: Thursday 04 April, 2019 Munich**
 - **Waiting for HF-EOP model**
 - **Start of processing: beginning of 2020, but maybe earlier**

IGS

- **IGS: response from Michael Moore**
 - Mostly agree on ITRS proposal
 - Adopt post EGM2008 model: Not all ACs are convinced this has a significant impact on GNSS
 - **HF EOP: awaiting for a “consensus” model**
 - Most ACs **not** in favor of applying a loading model
- **IGS time line for reprocessing:**
 - **15th - 17th April Dedicated AC workshop (after EGU)**
 - Start reprocessing probably June 2019
 - **But hope no delay will happen!!**

ITRF2020 Inputs by TCs:

specific model updates are strongly requested

- **All techniques waiting for the consensus HF-EOP model**
- **IVS: modeling the gravitational deformation for as many antennas as possible, possibly refine the thermal expansion modeling**
- **ILRS: SLR range biases to be estimated/applied**
- **IGS: up to date GNSS force models to be used & gravity field**
- **IDS: Improve analysis strategy, DORIS-specific model updates : SRP & SAA**

HF-EOP model

John Gipson Response:

I have had a good response from the IVS community in testing the various models.

I also know that there has been some testing in the GNSS community.

I understand that this is going to be a topic of discuss at the IGS Analysis Workshop following the EGU.

Mathis Blossfeld is beginning to test models with SLR data, and promises to have some results back by the end of April.

Based on preliminary results it looks like the Gipson and Desai models are the best of the models tested.

I think that it is reasonable to have some results by the summer of this year.

==> We need to decide soon which model to use for all 4 techniques

Gravity field

- To my understanding **two** models are available, “equivalent” and are of the same generation and “constituents”:
 - GRACE Analysis Centers at JPL/GFZ/CSR, “RL06”
 - CNES-GRGS “RL04”
- Were they compared?
- Who will use which model?

Summary

- General agreement of all techniques regarding proposed effects and model updates to be considered for the reprocessing
- ITRF2020 CfP is now disseminated¹ posted at the ITRF Website:

http://itrf.ign.fr/doc_ITRF/CFP-ITRF2020.pdf

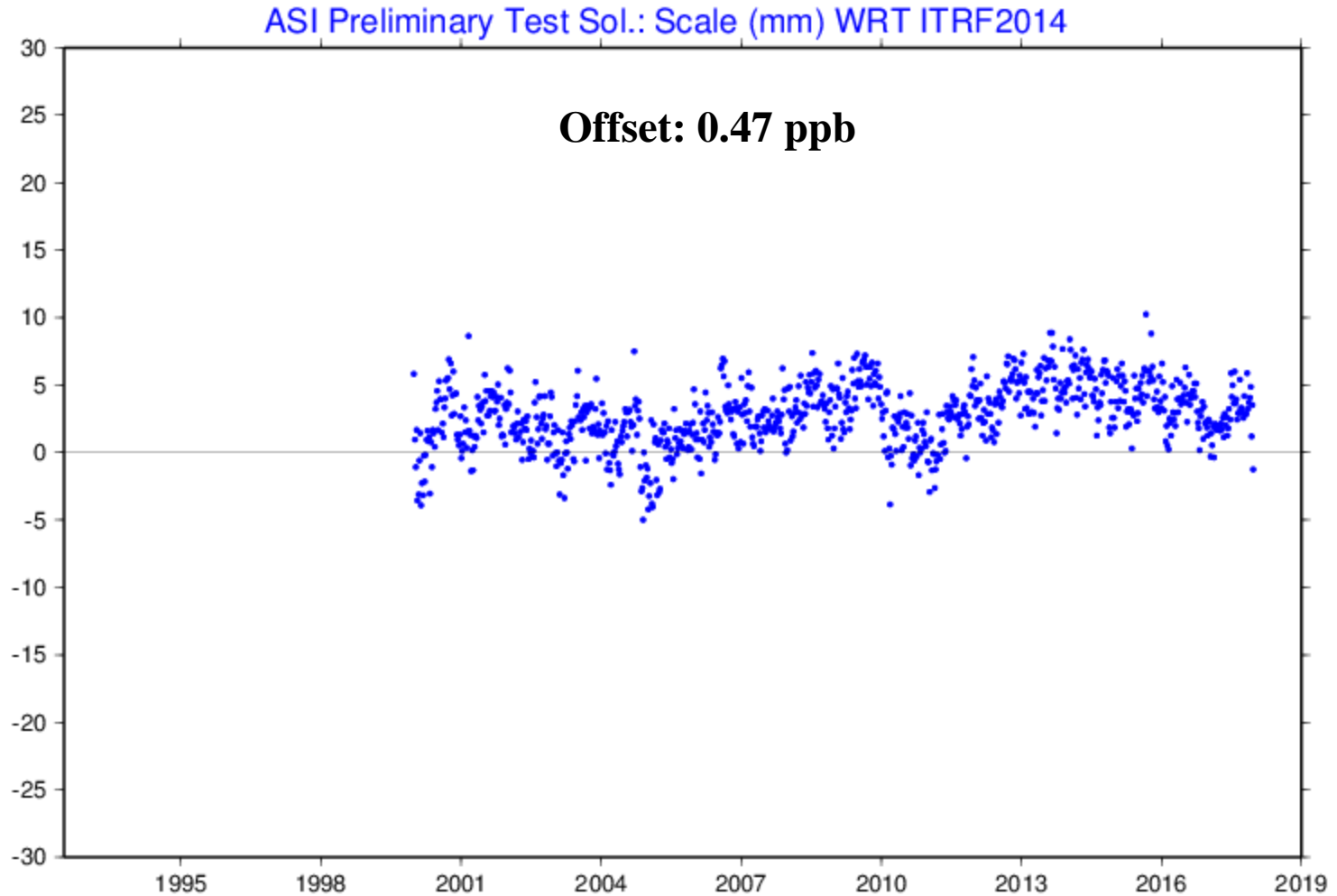
- In preparation for ITRF2020, the ITRS Center may
 - Request specific solutions for testing purposes, e.g.
 - SLR range biases estimated
 - New HF-EOP model applied
 - Others TBD
- The ITRS Center will follow up with all 4 Techniques about their progress in reprocessing efforts.

Schedule & time-line

Date	Action
January 10, 2019	Dissemination of the Call for Participation
February 10, 2021	Deadline for solution submissions by Technique Centers. Earlier submissions are welcome
April 2021	First and early results to be shared and discussed with the TCs.
Until end of May, 2021	Inter comparisons of the ITRF CCs solutions
~June, 2021	Preliminary ITRF2020 solution available for evaluation by TCs
Sep-Oct, 2021	Final ITRF2020 solution released by the ITRS Center

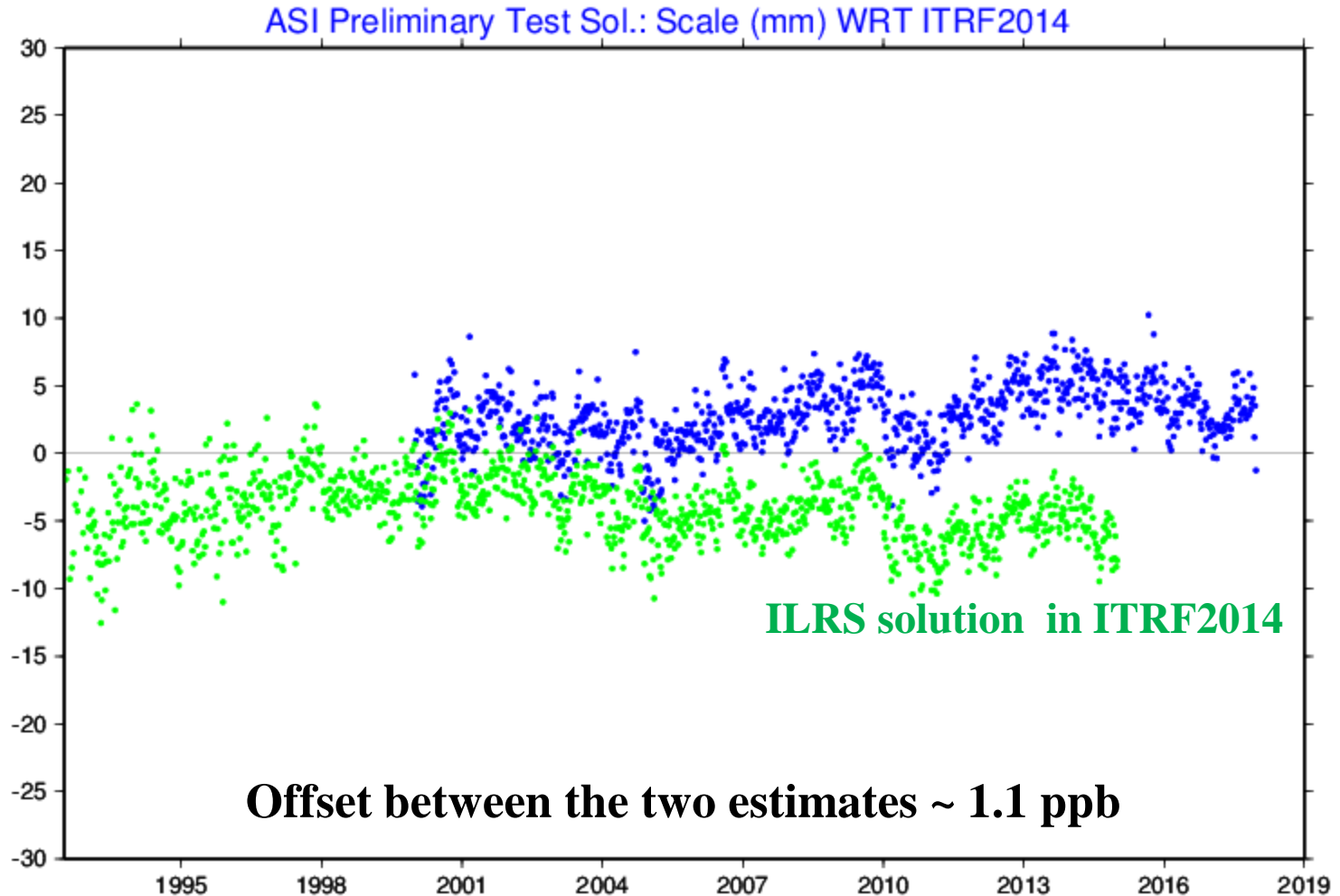
Backups

ASI(*) SLR Preliminary solution: Scale wrt ITRF2014



(*) Preliminary test solution provided by Cinzia Luceri

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(*) Preliminary test solution provided by Cinzia Luceri

GSFC VLBI vs ASI SLR : Scale wrt ITRF2014

