

2024 CCTF WGGNSS – Proceedings

Participants

Ad Interim chair

Noel Dimarcq (ND)

Excused: Pascale Defraigne

Secretary

Giulio Tagliaferro (GT)

G1 representatives

Michel Abgrall (MA)

Florian Heimbach (FH)

Artem Karaush (AK)

Juhyun Lee (JL)

Shinn-Yan Lin (SL)

Bijunath Patla (BP)

Tung Thai (TT)

María del Carmen Vélez López (MV)

Yuzhuo Wang (YW)

Excused: James Hanssen

Members:

Michael Coleman(MC)

Ben Everett

Marina Gertsvolf

Judah Levine

Andrey Naumov

Jerzy Nawrocki

Pierre Waller (PW)

Michael Wouters (MW)

Excused: Jerome del Porte

Observers:

Masaki Morikawa

Bernardino Quaranta

Elisa Pinat (EP)

Andrea Auer

Joon Hyo Rhee

Arnold Colina (AC)

Young Kyu Lee (YL)
Giancarlo Cerretto
Pia Kindl
Philipp Strauch
Thomas Schilling
Bin Jian
Ilaria Sesia
Weixiong Wang
Tadahiro Gotoh
Dong GUO

Summary

12 UTC: meeting opened

ND opens the meetings and presents the agenda.

ND presents the changes of membership in the group (see slides). No objection is made to the new composition.

GT presents the G1 2022 Trip calibrating GPS Galileo and for the first time BDS (see slides). Calibration covered APMP, EURAMET, and SIM G1 laboratories, but not COOMET one due to the current international situation.

YW presents the NIM G1 activities and the G2 calibrations performed (see slides). YM remarks that the NIM calibrator is quite old (more than 10 years) and that they are working on a new set up.

SL presents the G2 calibrations performed by TL (see slides). He says TL will purchase two new receivers next year. He reports possible jamming interference during calibration in NIS (Egypt).

MV presents the ROA G1 activities and the G2 calibrations performed (see slides). She remarks that ROA's equipment RO10 needed to be recalibrated due to a problem.

FH presents the G2 calibrations performed by PTB (see slides). He reports that PTB traveling box has traveled more than 14000 km since the last G1 calibration.

AK reports that unfortunately SU could not be part of the 2022 G1 trip due to the current logistical problems. Also, he reports that no lab has requested SU for a G2 calibration in the last year, and so none was performed.

AC reports that USNO does not have any updates except for the fact they are now uploading receiver data with the 1001-2022 calibration values.

MA reports the receivers set up at LNE-SYRTE (see slides). He also reports the calibration performed, both for UTC labs and other Institutions.

BP reports the NIST activities about G1 and G2 calibrations (see slides). He reports problems calibrating INM in Colombia due to the wrong setup of the traveling receiver at the local lab. He reports also that NIST will loan calibrating equipment for 10 years to SIM. Finally, he reports on the possibility of P1 and

P2 signal discontinuation by GPS. He said he participated in last month's CGSIC meeting and that the discontinuation should not happen in the next five years. Also, he suggests that future calibration could include GPS L5 signal.

ND comments that the WG might want to start the discussion to lead to a future CCTF recommendation on the topic.

TT presents INRIM GNSS setup and the stability of G2 calibration values at INRIM (see slides). He also presents the INRIM calibration equipment and past calibration experiences.

GT remarks that INRIM is fulfilling G1 guidelines approved last year in the WGGNSS.

YL presents the status of GNSS equipment at KRISS (see slides). He also presents the KRISS plan to fulfill G1 guidelines.

GT comments that the schedule of the next G1 campaign could be arranged so that KRISS has time to prepare.

EP presents the results of the TG on hardware delay long term stability (see slides). She reports an average trend of 37 ps per year for common clock receivers.

ND introduce the proposal to increase the rate of G1 campaigns from 2 to 3 years. No member of the working group has objections, and so the proposal is approved.

GT presents the results of the TG on calibration uncertainties (see slides). He reports the recommendation of computing TDEV and misclosures directly on the ionofree observations.

MW reports the results of the TG on traceability of GNSS to UTC (see slides) presenting the status of the dedicated survey.

PW highlights that it is important to liaise with GNSS providers on the matter. It is suggested that the topic be brought back to the ICG next year.

GT reports some recent progress in IPPP time transfer (see slides). He reports that BIPM is starting preliminary work to put IPPP in operational use for Circular T.

MC reports about IGS activities at the latest IGS workshop in Bern (see slides). He highlights the importance of UTC(k) submitting data to the IGS and the need to develop common guidelines.

GT says BIPM calibration data could be made accessible in an easier way to facilitate IGS operations.

GT presents the BP slide introducing the fact that P1 and P2 GPS signal could be discontinued.

ND says it would be important to have a CCTF recommendation on the topic at the CCTF – Session 2 meeting in 2025.

PW suggests a survey could be conducted among the lab to see which systems and signals are being tracked to better prepare the situation.

ND and GT agree. It is decided that a survey will be conducted, and that result should be available before the CCTF – Session 2 meeting in Sept. 2025 to prepare a recommendation.

GT proposes that in the next G1 trip all GPS measurements are collected to be available for reprocessing in case new signals are selected for GPS use in the future.

16:30 UTC: the meeting is closed.

Decisions

G1 repetition rate passes from 2 to 3 years.

A survey about systems and signals tracked by UTC labs will be conducted to prepare a CCTF recommendation at CCTF – Session2 meeting in Sept. 2025.