

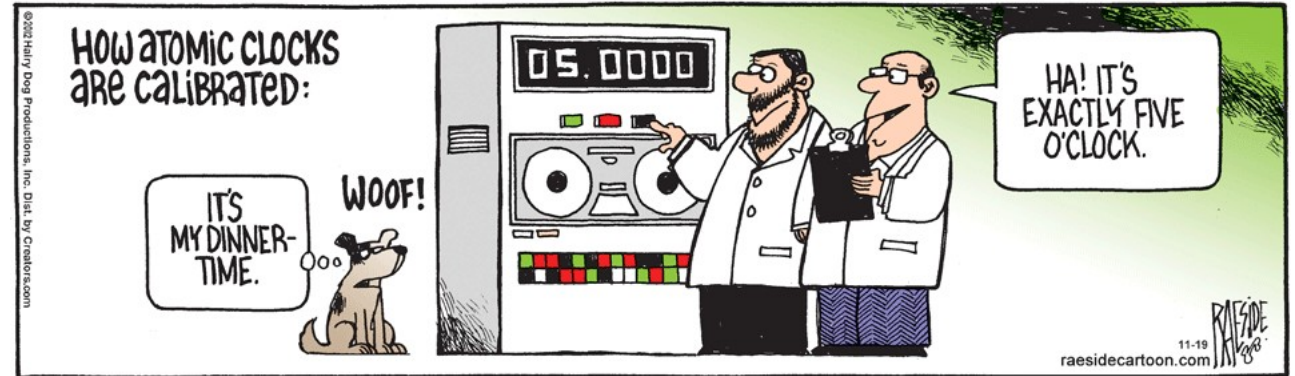
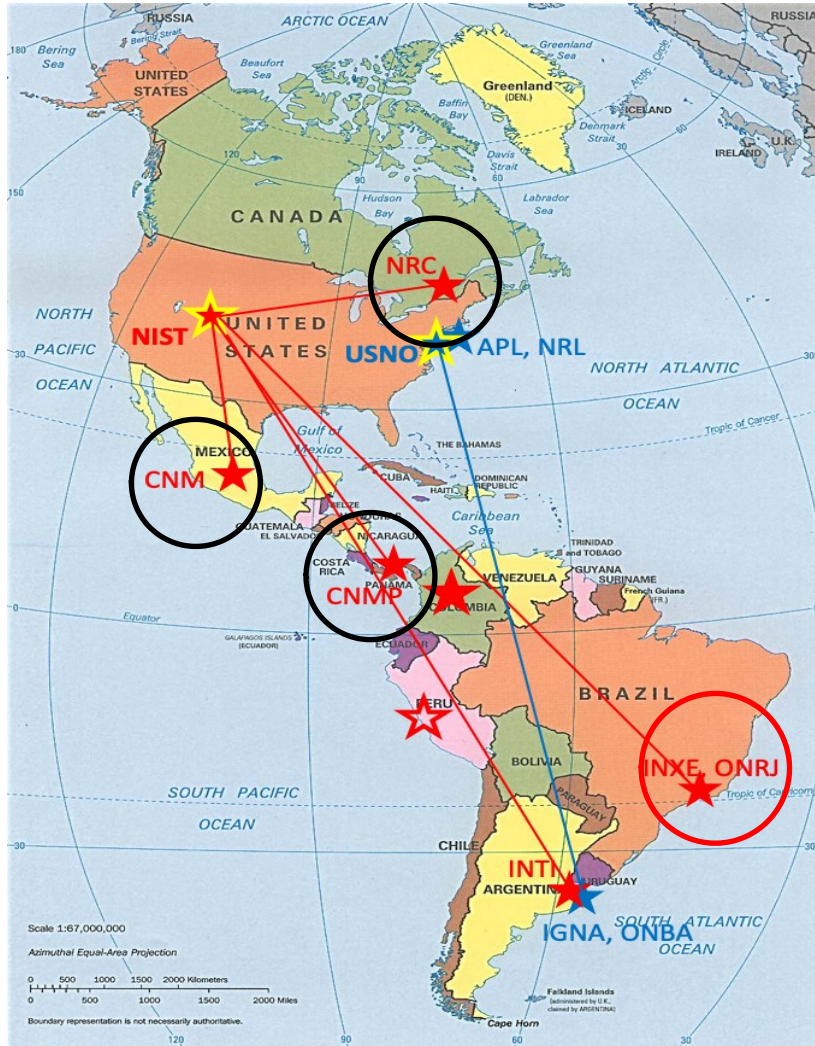
Recent G2 calibrations at SIM

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Time and Frequency Division – NIST, Boulder

May 23, 2022

★ brp1@nist.gov

Calibrations: Group 2 (G2)



○ Completed

- ◆ NRC : Ottawa, Canada / Cal_Id:1019-2017
- ◆ CNM : Queretaro, Mexico / Cal_Id:1011-2017
- CNMP : Panama / Cal_Id: 1011-2017
- INXE, ONRJ /Cal_Id: 1012-2020

○ Ongoing (almost over)

Argentina: Cal_Id 1014-2021

Calibrations: Group 2 (G2)

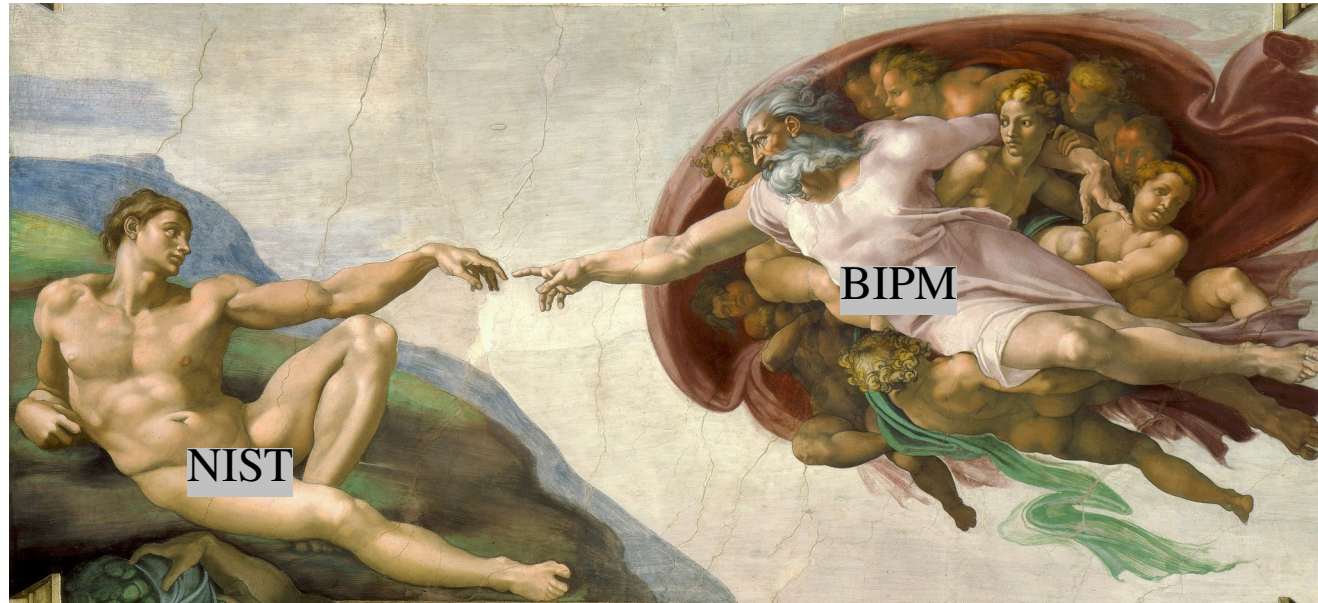


Image credit: Michelangelo, Public domain, via Wikimedia Commons

<https://webtai.bipm.org/database>

<https://webtai.bipm.org/database/canvas.html>

NIST-PTB link: Two-way + PPP
Calibrated receivers: nist, niss, nisc

- Cal_Id:1001-2014
- **Cal_Id:1001-2016**
- Cal_Id:1001-2018
- Cal_Id:1001-2020

Calibrations: Group 2 (G2)

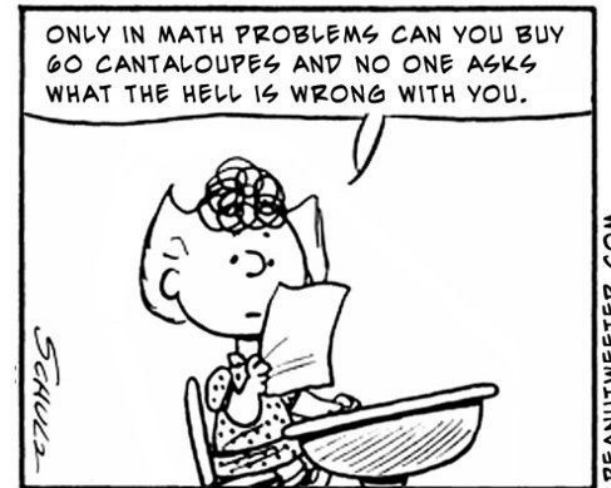
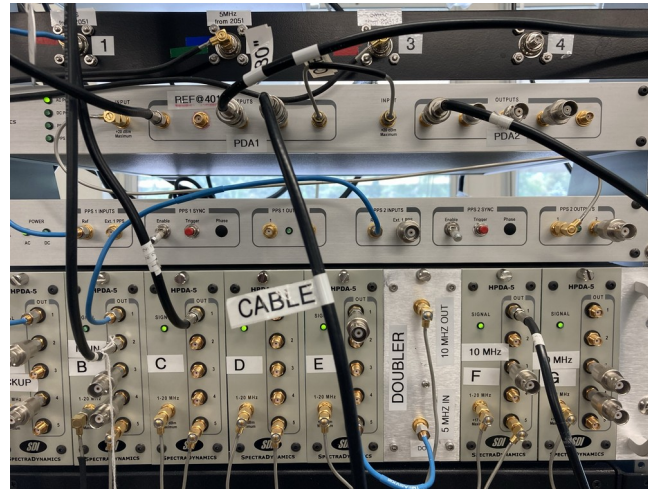


NIST calibration infrastructure

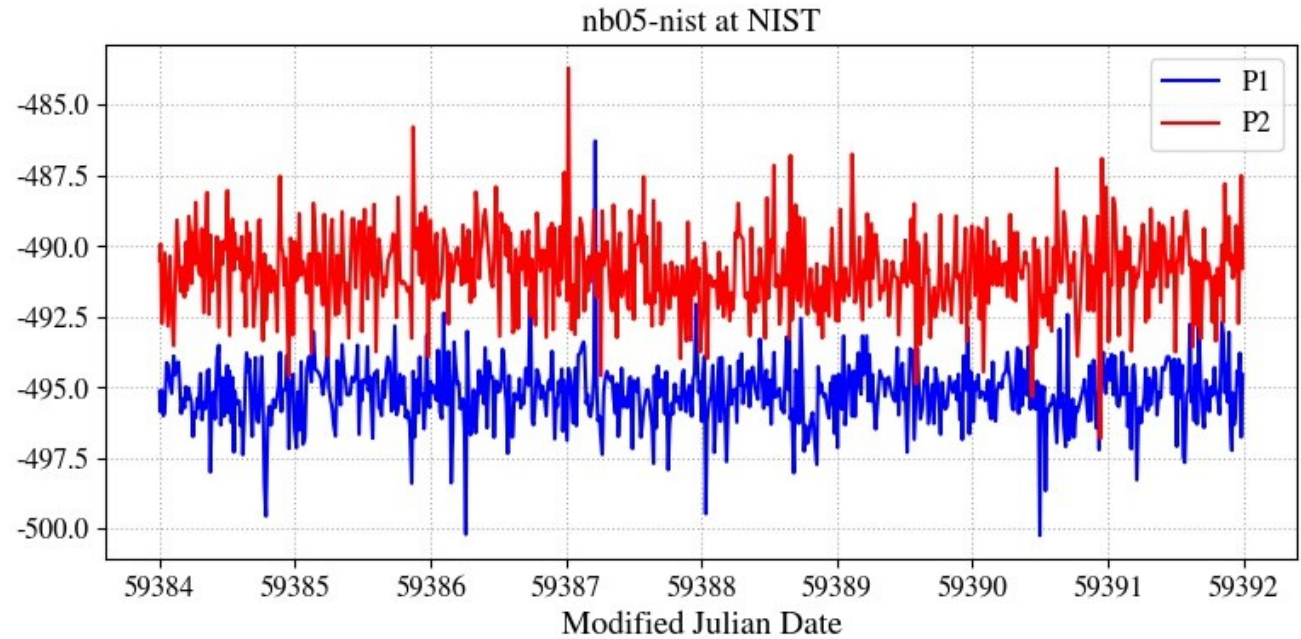
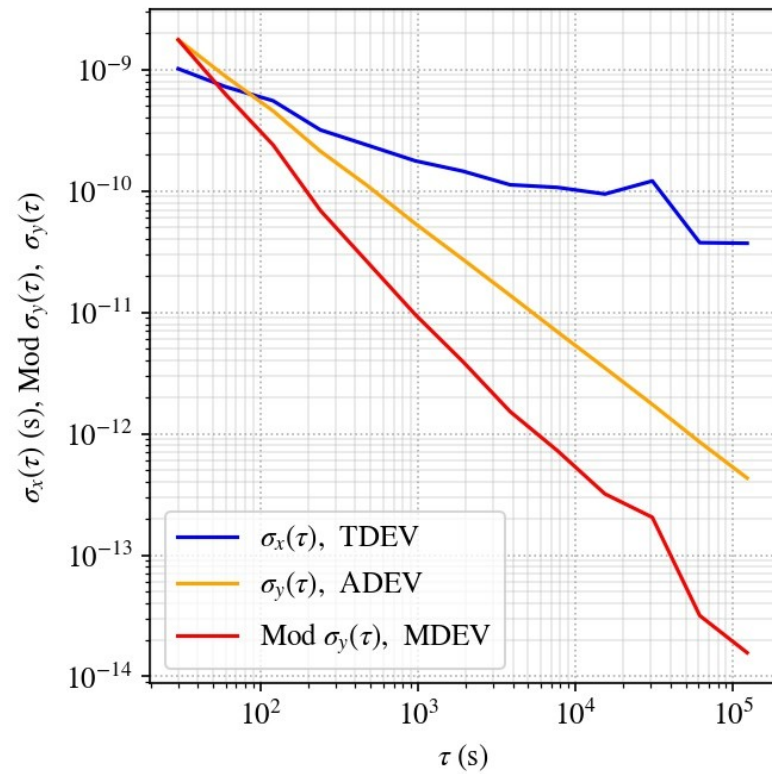
Signals from NIST time scale using H-masers, Cs

Pulse and frequency distribution amplifiers periodically characterized with WR trips

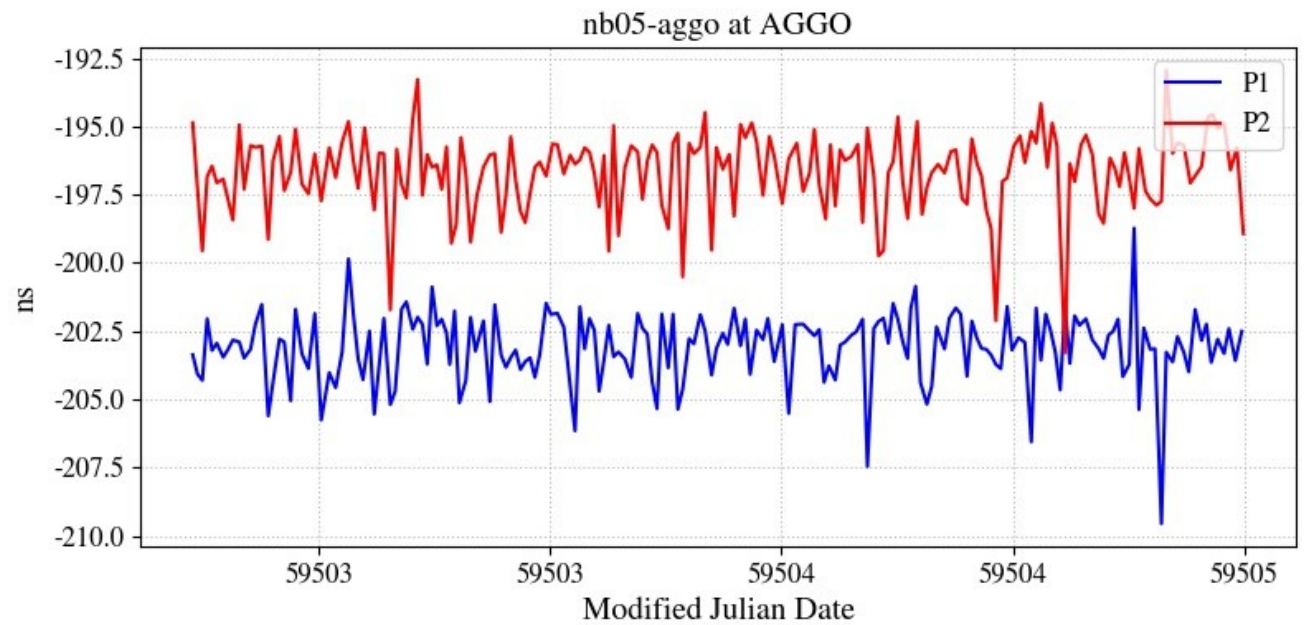
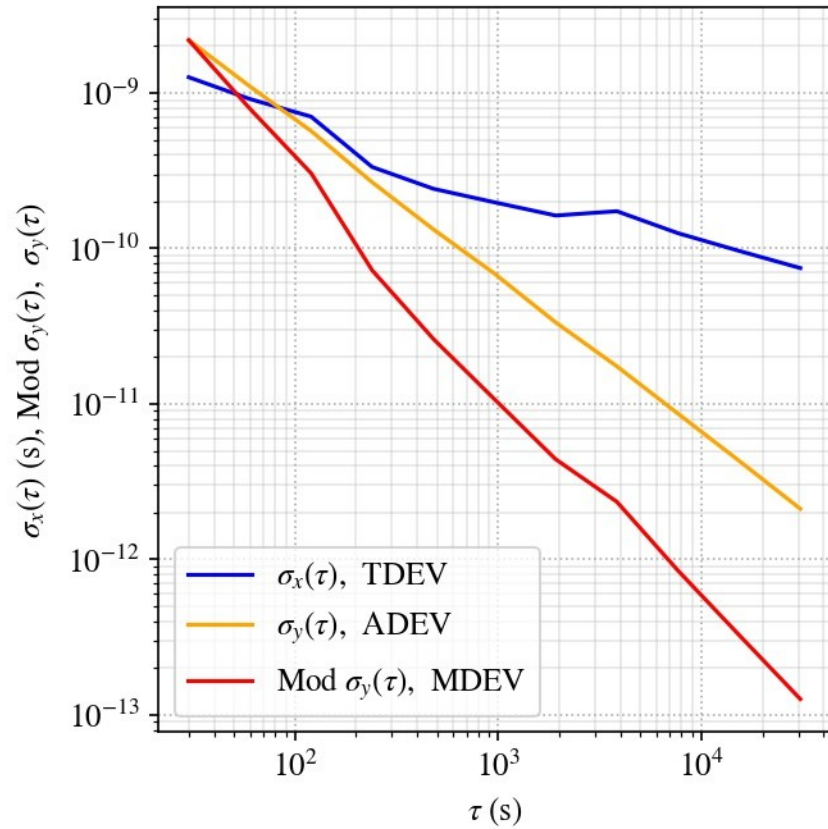
Data analysis and continuous monitoring



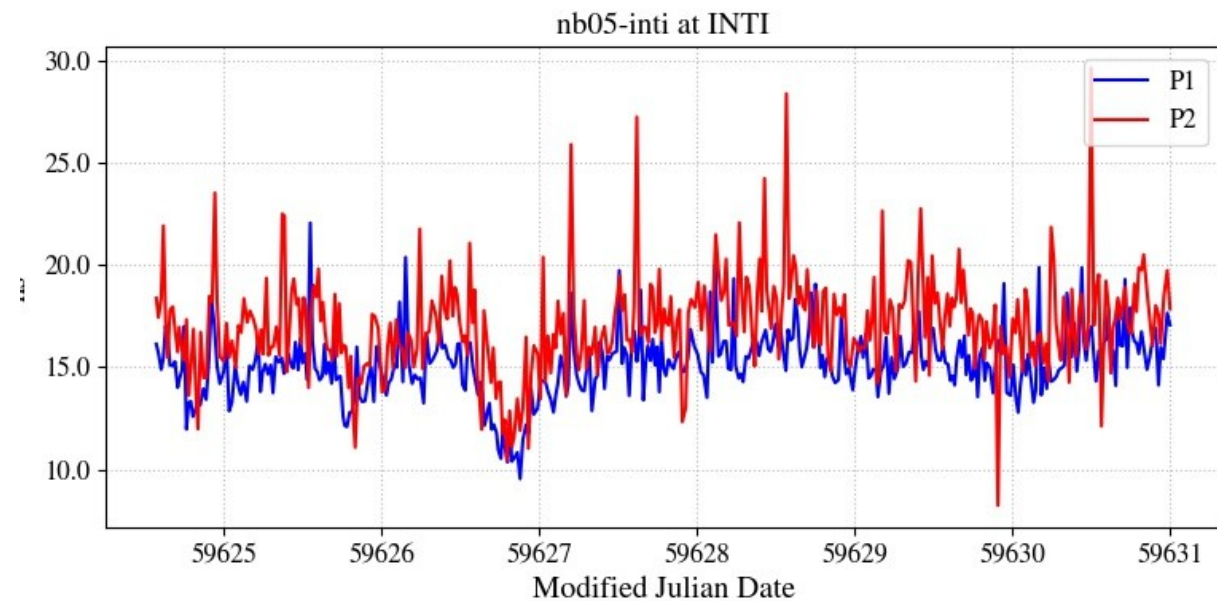
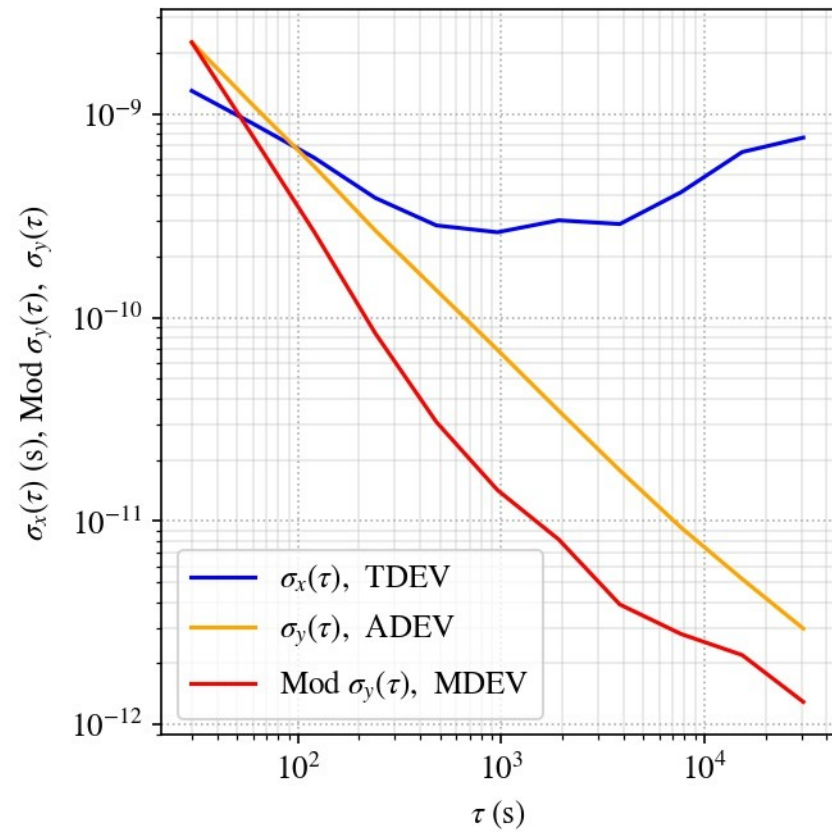
Calibrations: Group 2 (G2)



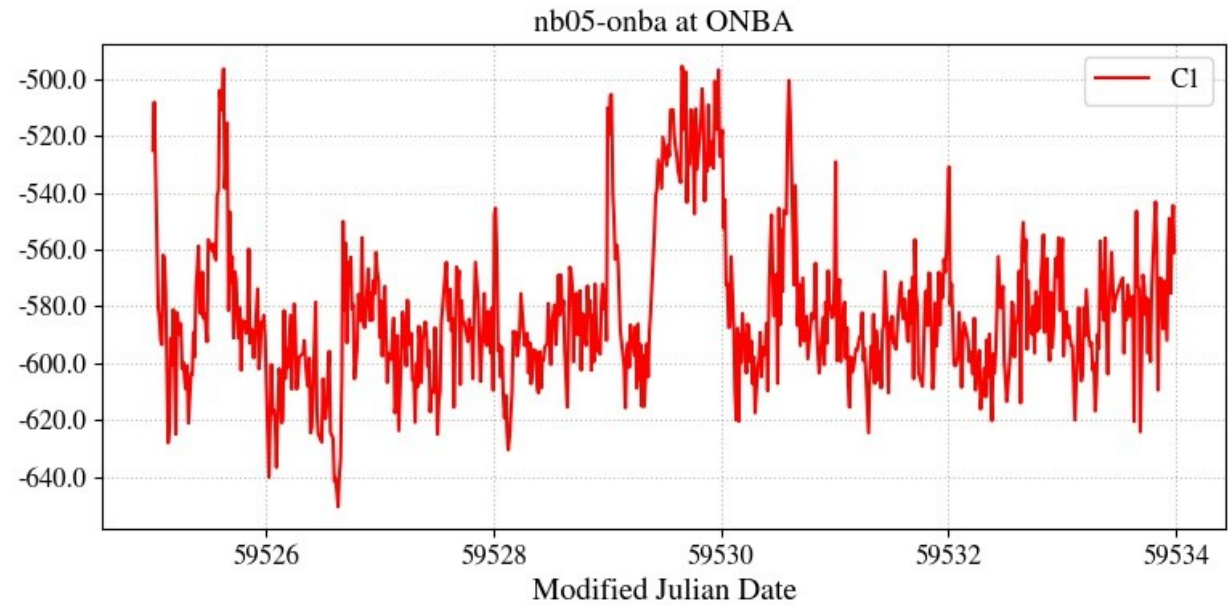
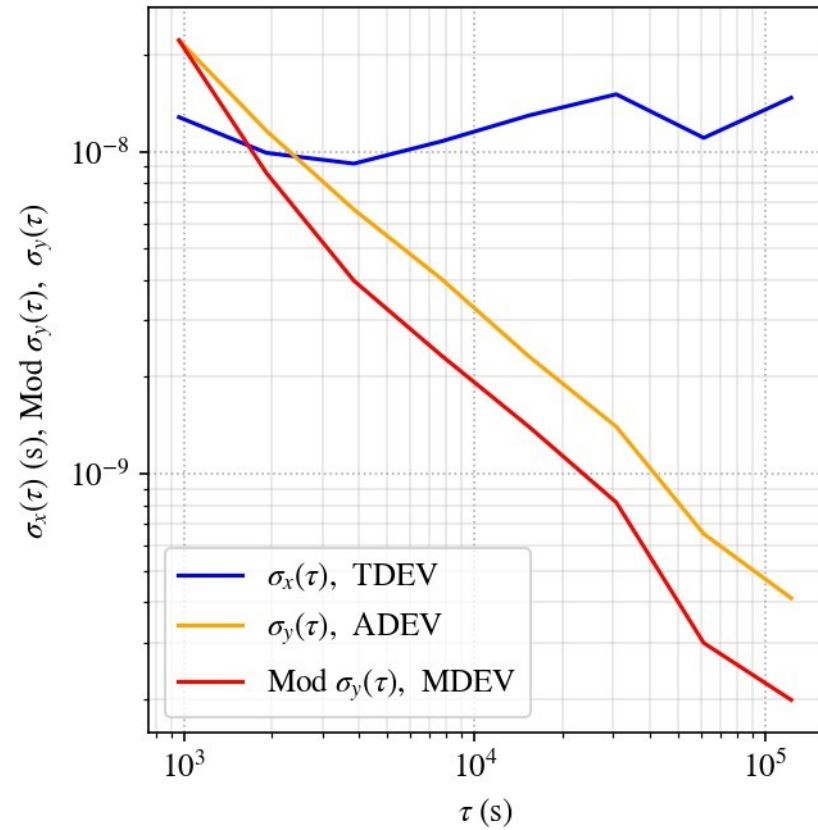
Calibrations: Group 2 (G2)



Calibrations: Group 2 (G2)



Calibrations: Group 2 (G2)



Calibrations: Group 2 (G2)

Preparing for G2:

- Contact NIST (brp1@nist.gov)
- Send a latest AnnexA information sheet
- NIST pays and arranges for shipping and customs to G2 lab (door to door).
- G2 lab is responsible for shipping and logistics back to NIST (door to door).
- All data must be uploaded to any accessible cloud locations at least on a weekly basis when the traveler is in the visited lab.
- Try to complete the trip within four months

Calibrations: Group 2 (G2)

-Thanks for inviting me-