

Characteristics and results of two years of a VLBI southern hemisphere intensive observing program

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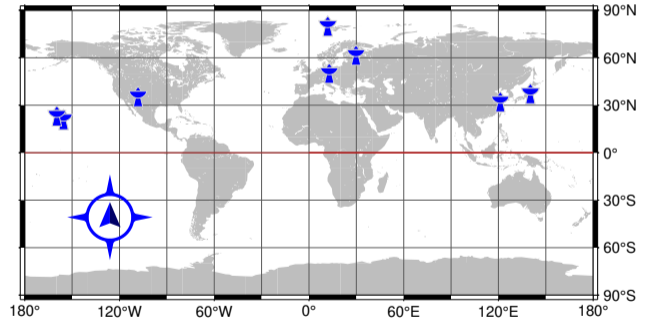
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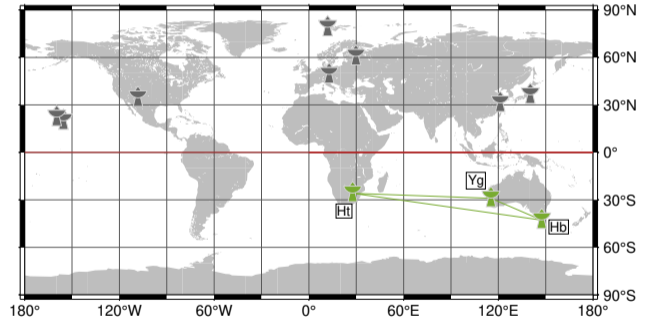
Intensive sessions

- Rapid service
UT1–UTC results
- Duration of one hour,
small network
- Sensitive to errors in a
priori values
- North-bias

Antennas participating in IVS Intensives 2019



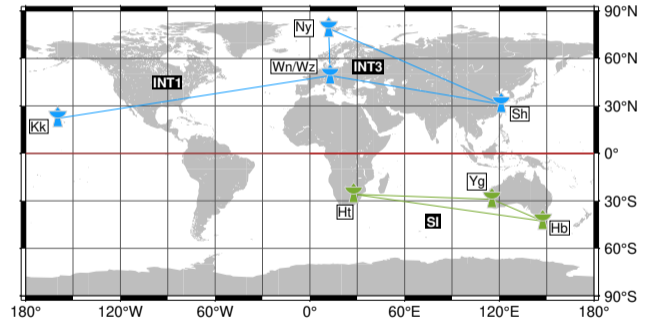
- Three station network
- > 50 sessions
(2020/21/22..)

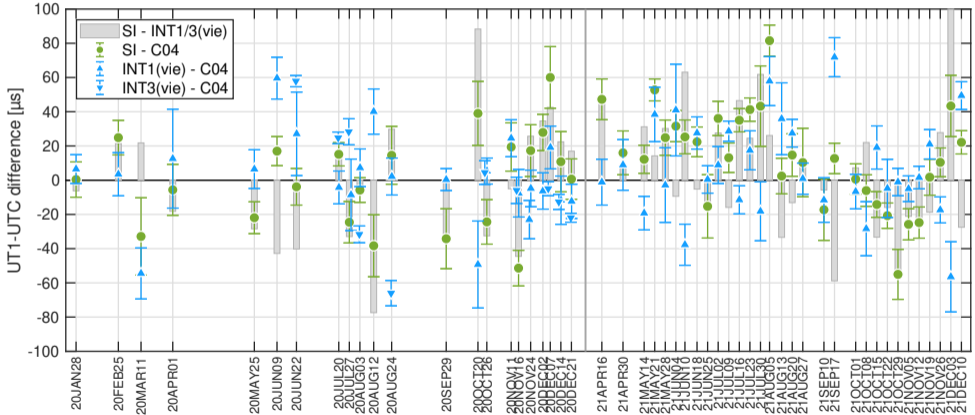


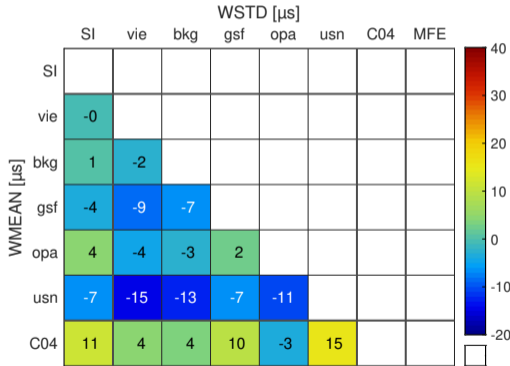
HART15M - HOBART12 - YARRA12M

Results of 53 SI

- 42 SI sim. to INT1
- 11 SI between INT1 and INT3
- Compared to:
 1. INT1/3 (vie)
 2. INT1/3 (4 other analysis centers)
 3. IERS EOP 14C04
- Analysed with VieVS using VIETRF2020 (Krásná et al.)



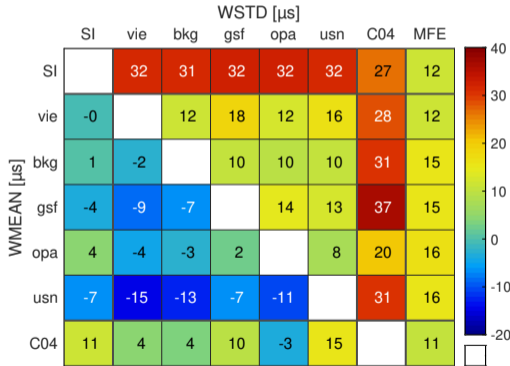




Different AC solutions

evaluate same INT1/3 sessions!

- Small SI biases w.r.t. INT1/3 (vie) and other AC.
- Partly larger biases among AC solutions and with C04.



Different AC solutions

evaluate same INT1/3 sessions!

- Small SI biases w.r.t. INT1/3 (vie) and other AC.
- Partly larger biases among AC solutions and with C04.
- WSTD SI to INT1/3 are in same range as with C04.
- Internal agreement INT1/3 \approx mean formal errors (MFE).

- The precision of the SI is equivalent to that of INT1/3.
- The UT1–UTC values estimated from SI show a scatter of $\sim 32 \mu\text{s}$ w.r.t. INT1/3. This is at the same level as the WSTD of SI-C04 and INT1/3-C04, amounting to $\sim 30 \mu\text{s}$ on average.
- In 2022 the SI sessions are observed every Monday at 6:30 UTC, the session data is publicly available via CDDIS.
- The current work is on routinely guaranteeing low latency and increasing automation. Once established, we might consider increasing the cadence.