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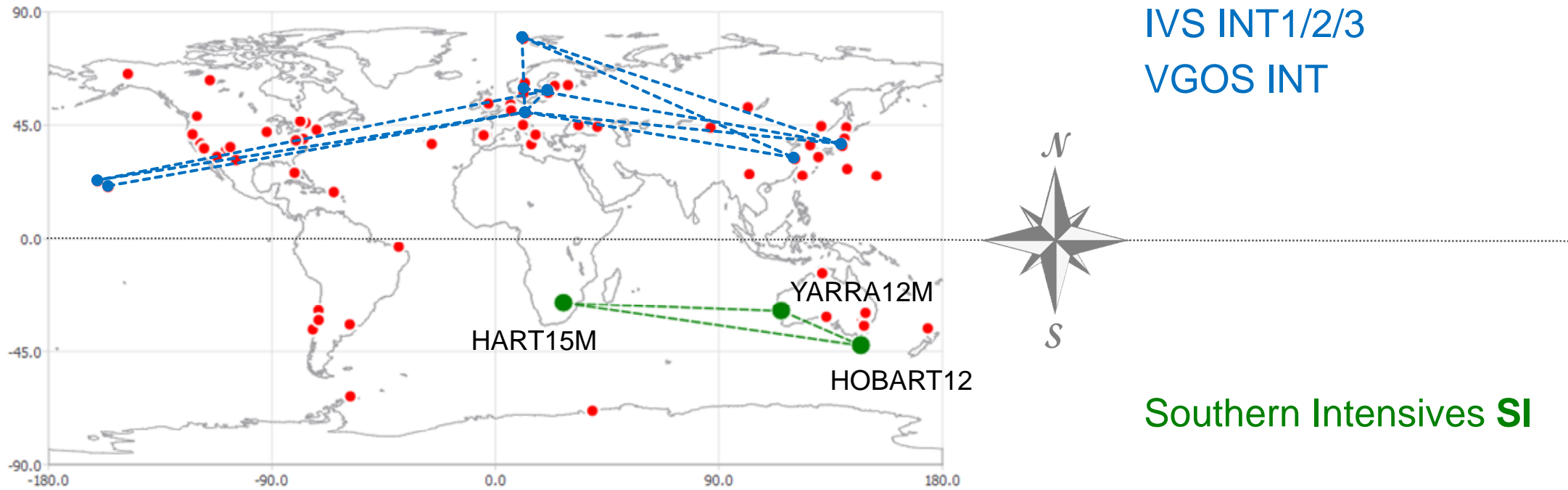
**ETH** zürich



# Probing a southern hemisphere VLBI intensive baseline configuration for dUT1 determination

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## Intensive sessions baseline configurations



## Year 2020

38 sessions scheduled

16 not available (technical problems during observation or recording, not enough data, could not be correlated yet)

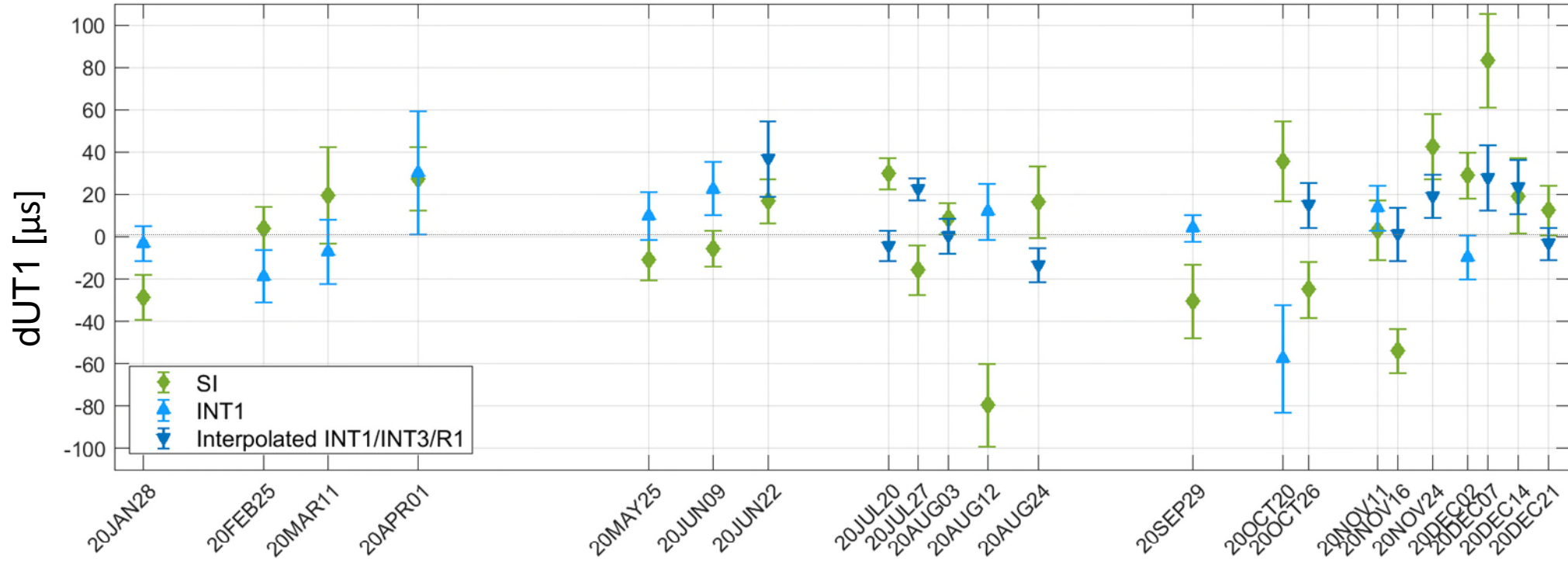
22 successfully observed, correlated and analyzed

11 sessions with two stations (HART15M and YARRA12M/HOBART12)

11 sessions with all three stations

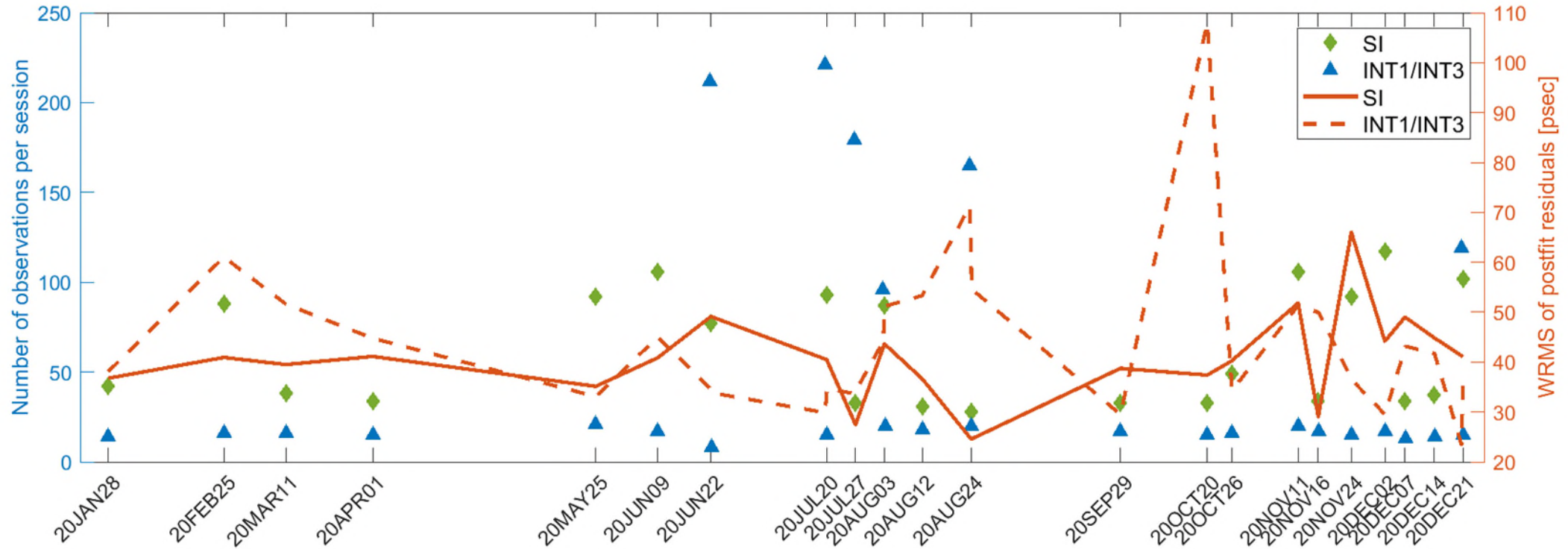
11 observed at 18:30 – compared with INT1 at 18:30

11 observed at 15:30 – compared with interpolated values from INT1/INT3/R1



WRMS [μs]	Mean formal error [μs]	Session type
27	14	SI sessions
33	11	All INT1/INT3 observed at SI dates

# Quantitative and qualitative comparison of intensive sessions



- Southern intensives have more observations for sessions with two stations.
- WRMS of postfit residuals of the solutions are on a similar level for SI and “northern intensives”.

- At least 14 sessions failed and many observations of the remaining sessions are unusable due to different start-up difficulties.
- The dUT1 results of 22 successful SI sessions were compared with INT1/INT3 derived values in terms of differences to IERS Bulletin B.
- The SI show slightly higher mean formal errors and slightly lower WRMS differences w.r.t. Bulletin B, than the IVS intensives for the same days.
- The southern hemisphere baseline configuration yields dUT1 results on a competitive level.
- The project is continued in 2021: 38 sessions scheduled, 11 observed
- The SI are still in the prototyping phase – the ultimate goal is to observe regularly on the Hartrao-Hobart baseline and provide results with a short latency.