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## Combination of the two radio space geodetic techniques with VieVS during CONT14

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Unlike CONT11, CONT14 does not have official information on common frequency standards for co-location sites. Nevertheless, according to Kwak et al. (2015), we have a possibility to find the co-located sites, which used the same clocks, through comparing clock rates from single technique solutions. Moreover, CONT14 includes co-located VLBI radio telescopes, i.e. HOBART26 and HOBART12. Therefore, it is a good test bed to develop the analysis strategy for future twin/sibling telescopes.

In this study, we compute GNSS single differences between the ranges from two stations to a satellite, using phase measurements with most of the errors corrected by the c5++ software. We estimate station coordinates and site common parameters, i.e. zenith wet delays, troposphere gradients and clock parameters, with the Vienna VLBI Software. Common clock parameters are limited to the sites that are sharing the same frequency standard during CONT14. Local tie vectors are introduced as fictitious observations for co-located instruments, GNSS-VLBI and even VLBI-VLBI, i.e. at Hobart. In this presentation, we show the comparison results between the combination solutions and the single technique solutions in terms of station position repeatability during 15 days.

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