



Combining VLBI and ring laser observations at normal equation level

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Observations from ring laser gyroscopes can be used to continuously monitor earth rotation with high resolution and without an external reference frame, which makes them unique in contrast to other techniques like VLBI or GNSS. A combination, however, of ring laser and VLBI data could potentially result in an improved accuracy of estimated earth rotation parameters. In this study, we use observations from the ring laser “G” (Grossring) located at Wettzell (Germany) and combine them with VLBI observations at the normal equation level. The Vienna VLBI and Satellite Software (VieVS) is used to set up the normal equations for each VLBI session as SINEX files. We present combined estimates for polar motion and length of day and assess the impact by the ring laser observations.