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IERS Working group on Combination of Space Geodetic Techniques at the Observation Level (COL)

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The different space geodetic techniques have different strengths and weaknesses for recovering geodetic parameters. This makes their combination useful. However they may have some systematic behaviour which can be detected and removed at the observation level. In order to review the interest in combining techniques at this level, a Working Group at the Combination Level (WG COL) was set up in the course of 2009 in the frame of the International Earth Rotation and Reference Systems Service (IERS). A major task of the WG COL is to study methods and advantages of combining space geodetic techniques (DORIS, GNSS, SLR, VLBI), searching for an optimal strategy to solve for geodetic parameters. The first action of the Working Group was to organize an inter-comparison benchmark campaign to serve as a test. The period chosen is from August 10 to August 30, 2008. It includes the intensive CONT08 VLBI period. The combination analyses are based on weekly or daily combined SINEX files which contain normal equations of station coordinates, Earth Orientation Parameters from all space geodetic techniques, tropospheric parameters for GNSS, DORIS and VLBI techniques and quasar coordinates for the VLBI technique. We will present the objectives and strategy of multi-technique combination, establishing conventions and some results already achieved.