

ITRF2020 application in the geodetic products for IVS

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Abstract. ITRF2020 is the most recent international terrestrial reference frame. The corresponding a priori corrections are applied for the station positions in the routine VLBI solution. The IVS products are derived from this solution. The obtained solution was built with respect to the ITRF2020 campaign requirements on the parameterization of a VLBI solution. The stability of the produced geodetic products is reviewed by evaluating the ITRF2020 impact on the computed residuals of the station positions and the other estimated parameters. The most prominent benefit of the applied a priori corrections is seen in the obtained residuals for the VGOS antennas. The VGOS antenna coordinates were available before ITRF2020 only from the internal VLBI solution. The lack of the legacy network in the VGOS sessions restricts moderately this type of a revisionary solution. The EOP products derived from the analysis of these VGOS sessions are affected by mismodeling of the a priori station positions. In particular, the deficiencies in the a priori corrections originate an offset of the obtained ERP time series. The ITRF2020 comes with the new PSD model, which seems to contribute to the geodetic products marginally. We consider also the smaller impact of the other relevant VLBI reductions on the geodetic products.