

Consistency evaluation of seasonal signals in ITRF2020

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Abstract. The new release of the International Terrestrial Reference Frame, ITRF2020, differs from ITRF2014 by the addition of parametric functions describing annual and semi-annual displacements for every station. ITRF2020 coordinates are now described with piece-wise linear functions, occasional exponential and logarithmic functions modelling post-seismic displacements and the newly provided seasonal parameters.

Firstly, the paper presents the seasonal parameters that are provided either in the Center of Mass (CM) or in the Center of Figure (CF) frame. Users are free to use one or the other set as a function of their applications. Secondly, the seasonal displacements determined by the four space geodesy techniques (DORIS, GNSS, SLR, VLBI) are recomputed in the same reference frame on the basis of ITRF2020 results. The level of consistency of those signals at co-location sites with sufficient observations will be discussed.