



## **The comparison of the terrestrial reference frames ITRF2000, ITRF2005 and ITRF2008 in the determination of the SLR station positions and velocities**

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The presentation contains the estimation of the quality differences between terrestrial reference frames ITRF2000, ITRF2005 and ITRF2008 for the SLR technique. The SLR station positions and velocities were computed by means of NASA Goddard's GEODYN-II program from monthly arcs of LAGEOS-1 and LAGEOS-2 satellites. The same data, parameters and models were used for all terrestrial frames. The analysis was performed for the period of five years from 1999.0 to 2004.0 only for the SLR stations with continuous data in the minimum period of four years (25 SLR stations). The comparison between ITRF2000, ITRF2005 and ITRF2008 included estimation of the following quality parameters: stability of the station coordinates, standard deviation of the coordinates determination, stations velocities, precision of the station velocities determination, and separately for the satellites LAGEOS-1 and LAGEOS-2: RMS of fit, the mean range bias and long term range bias stability for each site. The quality of the orbits was also compared. The results for the most sites show the little lower quality for ITRF2008 in comparison to ITRF2005 for all determined parameters. The quality of the ITRF2000 for the most cases was worse than ITRF2005 and ITRF2008.