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The contribution of ILRS to the International Terrestrial Reference Frame

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Satellite Laser Range measurements to small spherical geodetic satellites provide clean, unambiguous observations from which the orbits of the satellites may be determined simultaneously with tracking station coordinates and Earth Orientation Parameters. In this way SLR allows the origin and scale of the terrestrial reference frame to be monitored at the level of a few mm. SLR was the only technique used to realize the ITRF2000 origin (and drift); SLR and VLBI together realized the ITRF2000 scale and scale-rate. In these respects, the SLR role in maintenance of the ITRF is quite critical, and this role will continue as we look forward to the development of future issues of the ITRF in collaboration with the other geodetic services. In this paper we outline the quality of the official ILRS combination products of weekly station coordinates and daily EOPs that are now routinely available to the community within a few days of the observations being carried out. We further review progress with the ILRS contribution to the new IERS initiative towards a realisation of ITRF2004.