## 5.3 ILRS Stations' range biases revealed by a 20-year analysis of LAGEOS observations 1993-2014

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In this presentation, we discuss some specific results from our analysis that used the stable orbits of the two LAGEOS satellites to determine the reference frame simultaneously with bias values for every station.

Long-term averages of the station bias results show that most stations are providing range measurements that are accurate to better than 1cm. However, given the current scientific demand for mm-accuracy measurements, we discuss the need for technological and procedural improvement at many of the high-performance, high-precision stations that are exhibiting clear bias at a level of 5mm or more. We also discuss the impact of our work on the scale of the reference frame and the value of GM.