

## **Robust pre-processing of kHz rate laser observations**

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Besides the obvious benefits of rapid acquisition and improvement in normal point precision, high-rate laser ranging does present some pre-processing problems that go beyond the sheer volume of data involved. Primarily because of the very short pulse length of the laser (10ps cf ~100ps for few-Hz lasers) and the SGF single-photon policy, the measurements probe in fine detail the targets and lead to complex structure in O-C plots. We discuss our progress on pre-processing that maximizes the potential accuracy of the data, with particular emphasis on measurements to the LAGEOS satellites where our distribution model allows determination of an appropriate centre-of-mass correction for the satellites.