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A new laser ranging calibration target suited for accurate surveying at the SGF, Herstmonceux

A new ground based laser ranging calibration target was installed at the SGF, Herstmonceux in March 2016 alongside the primary SLR calibration target. The ranges to the targets measured by the SLR system is the sum of the 'system delay' and the surveyed distance between the target reference points and the SLR telescope invariant point. The target was designed and built at the SGF to have a well defined and stable reference point that could be accurately and easily surveyed with different techniques. The reference point on the current primary target is not well defined, and so is difficult to survey. This leads to some uncertainty in our applied system delay values. A survey of the SGF site was last performed in 2008 and so another is now overdue. A survey would determine the local ties between the SLR, GNSS and absolute gravimetry reference points, required for a GGOS site operating co-located geodetic techniques. The calibration targets would be included in this survey and the better defined system delay can then be applied to our SLR data.