



Practicalities of local ties and SLR calibration

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The geometric relationships between the instrumental reference points of space geodetic instruments situated in close proximity to each other, and between them and ground monumentation, need to be determined with high accuracy to achieve proper combinations of the various techniques and to monitor the stability of the points. The methods and results of repeated local tie surveys at several prime stations will be described, primarily at Mount Stromlo, Australia where SLR, DORIS, GPS and GLONASS instruments and fiducial pillars are connected with formal RMSs less than 1 mm and similar two-year repeatabilities.

These surveys also include the calibration target mirrors used routinely to measure the system delay in SLR stations. Four such external targets at Stromlo provide a very convenient way to monitor overall system and site stability. Other stations use variants of this scheme to ensure that their systems are calibrated as well as possible.