Geometry bias in a short baseline ground calibration

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We are reporting on a bias identified in a process of ground calibrations of station delays for the European Laser Timing project. The test target was located within one meter from the output aperture of a 0.75 meter diameter transmitting telescope. The local survey determined the mutual distance of a target from the system invariant point with 1 mm accuracy. The significant calibration constant dependence on the telescope pointing has been noticed. The dependence had a range exceeding +/- 10 mm for various pointing angles (!). The consecutive modeling of the experiment geometry identified the bias origin and determined the correct calibration value. The correct value is obtained for calibration "on-axis" of the system only. However, the reflector configuration of the transmitting telescope of WLRS does not enable such a measurement. The calibration constant was determined by fitting of values recorded for various angles taking into account the known angular dependence. The calibration description, the geometrical model and calibration results will be presented in detail.