



GPS Antenna Calibrations at the Geodetic Observatory Pecny, Czech Republic

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Determination of GPS antenna phase centre position (PC) at G.O. Pecny uses modified relative field calibration method providing absolute PC offsets in horizontal direction. Calibrated antennas are rotated between particular epochs of the observation. Then all epochs are processed in calculation of PC corrections together in procedure estimating PC offsets and patterns separately in more iterations. This iterative calculation method was automated recently, that allows to process higher amount of antennas and to use more settings of the calculation (e.g. various convergence limits or iteration operating). More effects of phase centre position are being explored using this (semi-absolute) calibration method: a) Effect of common radome type on more similar antennas used for recently placed stations of VESOG network. b) Backward calibration of intermediate antennas (used for baseline determination during calibration) and of antenna on GOPE site using absolutely calibrated antenna. c) Significance of GOPE site position change after using derived individual PC calibration instead of standard IGS PC corrections.