



Variations of the plumb-line from the new CCD zenith tube at Ondrejov Observatory

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The reconstruction of the Photographic Zenith Tube (PZT) at Ondřejov Observatory was finished in summer 2007. The main improvement of the instrument consists in the replacement of the photographic plate with the CCD chip, and a completely new electronic control system. The accuracy of the instrument has been improved and also the number of observations has increased substantially. After 16 months of intensive observations we can proceed to their analysis. In addition to the astrometric use of the observations we will also study variations of the local vertical. The observations were corrected for the instantaneous Earth orientation parameters from IERS EOC04 series and for the known tidal effect to get the series of non-tidal variations of local vertical. The first results and a comparison with the gravimetric observations of absolute and super-conducting gravimeters at the station Pecný (GOPE) which is situated very close to PZT (<150m) will be presented.