This presentation describes the researches upon the precise short-time GNSS solutions made in the Centre of Applied Geomatics, Military University of Technology. The data from ASG-EUPOS (Polish Active Geodetic Network) was processed using Bernese 5.0 software and EPN (EUREF Permanent Network) standards and models. In this study, the adopted 3-hour observation window is shifted every hour obtaining geocentric coordinates in ITRF2005 reference frame. The adjusted network consisted of 130 stations from Poland and the neighbouring countries, the period covered observations collected from June 2008 to June 2010. These two years of observations allowed to examine short-period oscillations which we found as closely related to the tidal (dynamic) frequencies. The analysis of the residua from IERS2003 tidal model was performed using least squares method with the Eterna software ("displacement" option) upon the idea of Chojnicki. It confirmed existence of the significant (several millimetres) energy in the frequencies corresponding to S1, K1 and K2. The effects in S1 frequency reflect thermal influences, but the reasons of K1 and K2 existence could be both: dynamic (liquid core resonance and non-linearity of K1 are very difficult for modelling as well as the annual modulation of S1) or artificial (GPS satellites' orbiting period, dynamic changes of satellites' constellation and network geometry, multipath, residual tropospheric and ionospheric errors etc.). Since the phases of K1 and K2 for all 130 sites are very inconsistent the local effects could be also taken into account as one of the possible reasons. The consistent pattern of regional displacement differences only in S1 frequency was obtained. The presentation describes the idea of the data processing and analysis, presents the results of vertical (Up component) oscillations in main tidal frequency bands, but also includes the discussion on the possible explanation of existence of short period oscillations in GNSS precise solutions.