The impact of the conversion to absolute antenna phase center models in the EUREF Permanent Network

Völksen, Chr.

Bayerische Akademie der Wissenschaften, GERMANY

The EUREF Permanent Network (EPN) consists of more than 180 stations and is still growing. It serves as a densification of the IGS network in Europe and also plays a major role in the realisation of the European Terrestrial Reference System 89 (ETRS89). This reference system is used as the standard for precise positioning, surveying and geodynamic studies throughout Europe. It is supported by EuroGeographics, which represents nearly all European national mapping and cadastral agencies (NMCA), and is therefore the dominating reference system in Europe. Many NMCA have established networks for real-time positioning services like SAPOS in Germany. The conversion to absolute phase center models has already been achieved in several of these networks due to the improved performance of the real time services. The Local Analysis Centres of the EPN still lack the conversion to absolute PCV. But this step is mandatory in order to be consistent with the networks of the NMCA. The poster will focus on the effects caused by the introduction of absolute antenna phase center models for a subnetwork of the EPN. Due to its large variety in installed GPS antennas – partly not even choke ring antennas - changes in the position of the GPS sites can be expected. Especially the impact of antenna domes, which are still not corrected in the EPN network, on the position and the use of a absolute antenna calibration models on the site coordinates for the subnetwork processed by the BEK local analysis centre will be shown.