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Unified Gravimetric Reference Frame for Polish IGS/EPN Stations and Geodynamic Test Fields

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Absolute gravity values are useful to regional geodynamic purposes as a complement of position monitoring at IGS/EPN permanent stations. Absolute gravity stations in region of geodynamic test field are also necessary as precise reference level for relative gravimetric measurements and long-period gravity monitoring.

Absolute gravimetric network to unify gravimetric reference level for GNSS permanent stations and geodynamic test fields had been established in Poland in 2007-2008. Within a framework of this project six absolute gravity stations were established nearby IGS/EPN stations and seven points in two geodynamic test fields: Pieniny Test Field (3 points) and Sudetes Network (4 points).

Final results of establishment of Unified Gravimetric Reference Frame for Polish IGS/EPN Stations and Geodynamic Test Fields are presented in the paper. Some issues with gravity reference level (comparing to Polish Fundamental Gravimetric Network), instruments parameters, observation elaboration and points stabilisation are also discussed.