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Verification of the accuracy of OPUS-Projects ellipsoidal heights using GSVS11 leveling data and deflections of the vertical observed by the DIAMOND Camera

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The accuracy of the differential ellipsoid heights on 218 benchmarks along the Geoid Slope Verification Survey 2011 (GSVS11) were estimated with an average accuracy of $\pm$4.4mm using NOAA's Web-based GPS Network Processing and Adjustment tool OPUS-Projects. The differential ellipsoidal heights were also computed using leveling data and deflections of the vertical (DoV), providing a data set for verification of the formal error estimation of the OPUS-Projects ellipsoidal heights. Details of the GPS data processing and its formal accuracy estimation are shown; and the OPUS-Projects ellipsoidal heights are compared and analyzed with respect to the DoV/leveling heights. Taking advantage of the distinctive error characteristics of each data set, the differences between the OPUS-Projects heights and the DoV/leveling heights will be discussed.