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The Geodetic Observatory at Ny-Aalesund: different techniques - different results?

H. P. Kierulf (1), B.-R. Pettersen, D. MacMillan

(1) Norwegian Mapping Authority (halfdan.kierulf@statkart.no/fax: +4732118101)

The Geodetic Observatory at Ny-Aalesund, Svalbard, is the northernmost fundamental station in the IERS network. As such it contributes important data to global reference frame realizations. We compare decade long time series from several space geodetic techniques (VLBI, GPS, DORIS) and note discrepancies in the results that are larger than individual technique error estimates. Separate GPS instruments also show discrepant results. Different solution strategies and different software packages also produce different results from the same GPS data sets. The discrepancies are found in all components, but especially in height, and both the linear trend and non-linear behavior are affected.