

A New Co-ordinate System for Sweden

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ABSTRACT

Sweden introduced the three-dimensional reference frame SWEREF 99 in May 2001. It is based on the permanent GPS stations that exist in Sweden, Norway, Finland and Denmark. The solution was adopted by the IAG subcommission of Europe (EUREF) as an ETRS 89 solution in 2000 and it is based on ITRF 97 epoch 1999.5.

SWEREF 99 will be the new national reference frame and our hope is that it also will replace the local reference systems leaving us with more homogenous local reference system. The situation today is that there exist several hundreds of more or less local reference systems based on various backgrounds. To do so, a map projection needs to be decided and this paper describes the work of introducing SWEREF 99 as well as working on the decision of a suitable map projection for users with demands from the mm-level to the m-level. Changing national and local reference frames affects all co-ordinate users from low-accuracy GIS-applications to high-accuracy scientific investigations.

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