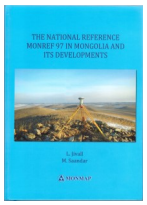
Mongolian Geoscientist

Society news



The National Reference MONREF97 in Mongolia and its developments

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Use of the Global Navigation Satellite Systems, GNSS, enable the availability of precise positioning everywhere, monitoring movements in the earth's crust and everyday use of modern navigation applications. In addition to the technological development, precise and up-to-date reference frames are a necessity for effective use of the new technology.

In this book we have presented the result from the original MONREF97 campaign and the remeasurement of it in 2014, MONREF2014 campaign, as well as results from the MONREF2010 campaign (dedicated to coordinate determination of new CORS-Continuously Operating Reference Stations), which also includes a subset of stations from the original MONREF97 campaign.

Concerning the future Mongolian height system, we believe a GNSS/geoid based height system is something to aim for in the future, which means it is time to start the preparations for it. This means for instance to follow the development of IHRS/IHRF and continue working on improving the national gravimetric geoid model.

When the new national GNSS/geoid based height system has been realized, then the old levelling network can also be re-adjusted to obtain updated heights for the benchmarks of the levelling network.

It is recommended to have a good set of points with both GNSS and levelling observations. This is needed both for future geoid models, used while still having the old levelled based BSL height system, but also for the possible re-adjustment of the old levelling network, after changing to a GNSS/geoid based height system.

Concerning gravity, the existing gravity network and system of Mongolia need to be improved in terms of accuracy and connection to the new International Gravity Reference System/Frame. A new gravity system will benefit both future geoid models, used for conversion to the old BSL, and the introduction of a future GNSS/ geoid based height system

This book is a technical guide or reference material on the MONREF97 system to understand its essentials and to be used as reference. It is designed for geodesists, researchers, land surveyors, teachers and students who are interested to get more detailed information on MONREF97 and its developments.

Book published and is available
https://www.researchgate.net/publication/345159456_MONREF97_2019_zassan_2