Airborne gravimetry for geoid determination with Lacoste Romberg and Chekan gravimeters

Airborne gravimetry for geodetic purposes such as geoid determination and global geopotential models requires good bias stability, as well as good performance in turbulence for large-scale national projects. DTU-Space has since many years carried out large area airborne surveys over polar, tropical and temperate regions. Recently we have started flying two gravimeters (L&R and Chekan-AM) side by side for increased reliability and redundancy in several surveys. In the paper we will give some examples of recent survey results, confirming accuracies in the 1 mGal range for a well-controlled Danish flight test, and around 3 mGal for intercomparisons of Chekan and L&R results in Nepal, one of the most challenging field survey regions on the Earth. We also indicate the good agreement between airborne gravity and GOCE data in Nepal, and outline the use for improved geoid determination.

General information
State: Published
Organisations: National Space Institute, Geodynamics
Authors: Forsberg, R. (Intern), Olesen, A. V. (Intern), Einarsson, I. (Intern)
Pages: 265-270
Publication date: 2015
Main Research Area: Technical/natural sciences

Publication information
Journal: Gyroscopy and Navigation
Volume: 6
Issue number: 4
ISSN (Print): 2075-1087
Ratings:
Scopus rating (2016): SJR 0.27 SNIP 0.825 CiteScore 0.99
Scopus rating (2015): SJR 0.269 SNIP 1.206 CiteScore 0.93
Scopus rating (2014): SJR 0.279 SNIP 1.006 CiteScore 0.65
Scopus rating (2013): SJR 0.292 SNIP 0.65 CiteScore 0.44
Scopus rating (2012): SJR 0.248 SNIP 0.366 CiteScore 0.34
Scopus rating (2011): SJR 0.163 SNIP 0.135 CiteScore 0.12
Original language: English
DOIs:
10.1134/s2075108715040069
Source: FindIt
Source-ID: 276360743
Publication: Research - peer-review › Journal article – Annual report year: 2015