

Geist, T., Höfle, B., Rutzinger, M. & Stötter, J. (2005): Der Einsatz von flugzeuggestützten Laserscanner Daten für geowissenschaftliche Untersuchungen in Gebirgsräumen. Photogrammetrie, Fernerkundung, Geoinformation, 3/2005. 183-190.

Abstract

Airborne laser scanning (ALS) is a state-of-the-art technology for obtaining topographic information with high resolution and high accuracy. Though already a wide variety of application fields exists, there is not much experience in high mountain environments. In the EU financed OMEGA project 14 data sets over glaciers in Austria and Norway were recorded and analysed. The results show that the data quality (vertical and horizontal accuracy) meets the requirements for glaciological applications. There is a clear advantage towards methods based on optical data due to the ability to obtain topographic information also in snow-covered areas. A recently started project deals with the utilisation of ALS data in alpine natural hazard management with a focus on determining surface properties (e.g. surface roughness). In the project starting phase the prototype of a management system for ALS data based on Open Source software components is set up and object-oriented analysis methods are tested. With the growing number of ALS data sets in high mountain environments a further development of applications can be expected.