

## DYNAMICS AND STRUCTURE OF THE ALPINE FOLD BELT

H.-G. Kahle  
Institut für Geodäsie und Photogrammetrie  
ETH Zürich  
HPV G 52, ETH-Hönggerberg, 8093 Zürich, Switzerland

Several recent measuring campaigns have made it possible to discuss the structure and present-day dynamics of the Alps in terms of geodesy and gravimetry. Recent uplift rates obtained from repeated precise levelings and isostatic gravity anomalies show a strong correlation along the central Alpine chain, especially in Canton Graubunden, East Switzerland. It is tempting to assume that the uplift there is partly controlled by isostatic rebound effects. Field observations indicate that these phenomena are still active in the Alps. It is therefore planned to study the uplift processes by applying a number of geodetic and gravimetric measuring techniques, such as the determination of non-periodic secular variations of gravity, of the deflections of the vertical and tilt changes monitored by hydrostatic levelings.

Future projects in the field of gravimetry and geodynamics in Switzerland are focused on international projects, such as the International Lithosphere Project (ILP), the European Geo-Traverse (EGT) and NASA's Crustal Dynamics Project. Of particular importance are intermediate wavelength components of the gravity field which are indicators of deep seated mass anomalies most likely being associated with lithospheric subduction during continent-continent collision.