Geophysical Research Abstracts,
Vol. 10, EGU2008-A-11985, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-11985
EGU General Assembly 2008

A data fusion technique for combined application of geodetic and geotechnical observations for crustal and structural deformation monitoring

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Geotechnical and geodetic observations are widely used for deformation monitoring of the crust and structures (such as dams and power plants). Although, both techniques have proven their potentiality for deformation monitoring, however, so far have not been applied in the combined manner. In this paper, by offering a data fusion technique we have shown how geodetic and geotechnical observations can be combined in a model for the computation of the strain tensors. The method is numerically tested via simulated deformation studies.