



Measurements of glacial isostatic adjustment within GGOS

M.A. King

School of Civil Engineering and Geosciences, Newcastle University, Newcastle upon Tyne, NE1 7RU, UK
(m.a.king@ncl.ac.uk)

The recent increase in interest in models of glacial isostatic adjustment (GIA), due mainly to the GRACE satellite mission, highlights many weaknesses in our current geodetic infrastructure, both in terms of field equipment and models used in analysis. Recent and planned deployments of large GPS networks in Greenland and Antarctica go some way to addressing the need for more measurements, but there are still important gaps, including large regions where there is no exposed bedrock for conventional ground-based observation. Systematic errors at long periods currently degrade geodetic observations of GIA. Furthermore, uncertainties in defining the geocentre strike right at the heart of polar GIA measurements. This talk will highlight areas where developments are required and discuss possible solutions to these problems – a purely geodetic solution may not be optimal.