

Geophysical Research Abstracts,
Vol. 10, EGU2008-A-08308, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-08308
EGU General Assembly 2008
© Author(s) 2008



Analysis of vertical motion at Herstmonceux from satellite geodesy and absolute gravity

G. Appleby, M. Wilkinson and V. Smith

Space Geodesy Facility, Herstmonceux Castle, Hailsham, UK (gapp@nerc.ac.uk / Fax +44 1323 833929)

The Space Geodesy Facility (SGF) at Herstmonceux, UK, operates a highly precise and prolific ILRS satellite laser ranging station, two IGS GNSS receivers (GPS and GLONASS), an absolute gravimeter and associated environmental monitors including an automatic ground-water-level measurement system. The laser ranging facility has been operational for 25 years, the HERS IGS station for 15 years and the absolute gravimeter for eighteen months, the latter in collaboration with the Proudman Oceanographic Laboratory and University College London. In this poster we report results of laser ranging, global and differential GPS, and preliminary absolute gravity analyses carried out primarily to investigate on site vertical stability and local loading effects. Present in the results are strong correlations between local hydrological variations and vertical seasonal signals whose magnitudes suggest that they are driven by a combination of local loading and global Earth mass-centre variations.