

## **Absolute Gravity versus Surface Uplift Observations in Greenland**

**T. van Dam**<sup>1</sup>, O. Francis<sup>1</sup>, and J. Wahr<sup>2</sup>

1) Faculté des Sciences, de la Technologie et de la Communication  
University of Luxembourg, Luxembourg.

2) CIRES and Dept. of Phys., University of Colorado, Boulder, CO, USA.

Since 1995, absolute gravity has been observed at four sites in Greenland. By comparing changes in absolute gravity with surface displacements, we can separate crustal motion due to present day mass changes with those due to glacial isostatic adjustment. However, over the last 17 years, the present day ice mass changes on the ice sheet have been extremely non-linear. We find that the ratio between the absolute gravity and GPS determined uplift in the region is also non-linear and may provide insight into the sign of the glacial isostatic adjustment in the region as well as into the present day ice mass changes.

Keywords: crustal displacement, absolute gravity, GIA