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GLACIAL ISOSTATIC ADJUSTMENT IN THE LAMBERT GLACIER REGION, NORTH AMERICA AND EUROPE

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Since 1998, remote permanent GPS installations have been operating in the Lambert Glacier Drainage Basin, East Antarctica, to measure the rates of glacial rebound. New horizontal and vertical velocity estimates at these sites provide surprising insights into the glacial and tectonic history of the Lambert Glacier Drainage Basin and, coupled with velocity estimates at other sites operating permanently in Antarctica, provide constraints on the deformation of the continental as a whole. The accuracy of the velocity estimates is approaching 1 mm/yr, brought about by recent improvements in the analysis of the geodetic data. We will make comparisons of uplift rate estimates in Antarctica with those at permanent sites in North America (the Laurentide Ice Sheet) and northern Europe (the Fennoscandian Ice Sheet) and comment on the implications for glaciological models of the ice sheets.