

Effects of the ice-stream basal conditions on its surface elevation. Cry for velocity data

Olga Sergienko, Robert A. Bindshadler, and Douglas R. MacAyeal

Using simplified numerical model of the ice-stream flow we demonstrate that observed ice-stream surface elevation changes most recently interpreted as temporal changes in basal water volume could be explained by variations in ice-stream basal conditions. Our results suggest that subglacial water volumes may not be directly proportional to limited sampling of surface elevation changes. Simultaneous measurements of surface velocity would be tremendously valuable in improved interpretation of surface elevation changes.