



Grounding-line Deposystems – Sediment fluxes, Geometries and Ice Stability

Ross Powell

Northern Illinois University, Geology and Environmental Geosciences, DeKalb, United States (ross@geol.niu.edu)

Since the earliest 20th century grounding-line depositional systems have been used to infer ice dynamics and glacial history from glacimarine systems. More recent process studies combined with new marine landsystem data and extended stratigraphic records from long geological cores, are refining our understanding of these systems and how they may be used in paleo-glaciological inferences of past ice sheet dynamics, regimes and history. Furthermore, although still too few, newer models are attempting to integrate ice flow with sedimentary processes and fluxes to better constrain ice dynamics. These newer data and models will be summarized and used to discuss past and future ice sheet dynamics. More observations and data are required from modern grounding zones to test the models and to provide cleared understanding of how to interpret older deposits - the libraries of past grounding-line behavior.