

GPS velocity from the Pine Island Glacier drainage area

Truffer, Bindschadler

Pine Island Glacier is one of the glaciers draining the marine West Antarctic Ice Sheet and is believed to be particularly vulnerable to change. A series of velocity observations derived from remote sensing show that the glacier continues to accelerate. Here we present results from GPS observations at a location near the main glacier. The data spans two summer seasons with interruptions in winter due to power problems. A time series analysis show that there is a small seasonal variation in flow. Since surface melting is not believed to be a factor here, the variation could be related to previously suggested seasonal variations in melting near the grounding line, which also appears to be manifested in the sub-iceshelf topography.