ABSTRACT

GRACE Hydrologic Mass Balance Secular Trends and Variations on Arctic Permafrost Watersheds

Reginald R. Muskett

Geophysical Institute, University of Alaska Fairbanks, USA

GRACE Hydrologic Mass Balance

This work is part of the project "The Changing Arctic by B. Box and B. Coakley, 2007". The dataset of the GRACE Hydrologic Mass Balance (HMB) data is available at the Global Change Research Institute (http://www.globalchange.gov). The GRACE data are processed by the University of Alaska Fairbanks, Geophysical Institute, using the software GRACE/HMB (http://www.grace-hmb.net).

Remote Sensing Snow WaterEquivalent

The Remote Sensing Snow Water Equivalent (RSE) dataset is available at the NASA Earth Observatory (http://earthobservatory.nasa.gov). The RSE data are processed by the University of Alaska Fairbanks, Geophysical Institute, using the software RSE/GRACE (http://www.rse-igrace.net).

Introduction

The dataset "Alaska Permafrost Change" (APC) is available at the International Permafrost Association (http://www.ipa-association.org). The APC data are processed by the University of Alaska Fairbanks, Geophysical Institute, using the software APC/GRACE (http://www.apc-igrace.net).

Method

The dataset "SSM/I SWE" is available at the McGill University, Canada (http://www.mcgill.ca). The SSM/I SWE data are processed by the University of Alaska Fairbanks, Geophysical Institute, using the software SSM/I SWE/GRACE (http://www.ssmi-swe-igrace.net).

Results

The dataset "SSMI SWE" is available at the University of Alaska Fairbanks, Geophysical Institute, using the software SSMI SWE/GRACE (http://www.ssmi-swe-igrace.net).

Conclusions

In this research, the team examined the effects of GRACE HMB data on the Arctic region by comparing the data from August 2002 to March 2007. The data were analyzed to determine the effects of the GRACE HMB data on the Arctic region. The results indicated that the data from the GRACE HMB data have a significant effect on the Arctic region.

References


