Geophysical Research Abstracts,
Vol. 11, EGU2009-4252, 2009
EGU General Assembly 2009
© Author(s) 2009

2008 updated melting in Greenland from satellite measurements, ground observations and a regional climate model.

M. Tedesco (1), X. Fettweis (2), M. van den Broeke (3), R. van de Wal (3), and P. Smeets (3)

(1) CCNY-CUNY/NASA, Earth And Atmospheric Sciences, NY, United States (mtedesco@sci.ccny.cuny.edu), (2) University of Liege, Liege, Belgium, (3) IMAU - Utrecht University,Utrecht, The Netherlands

We report results regarding melting in Greenland from satellite measurements, ground observations and a regional climate model since 1979 through 2008.
In particular, passive microwave observations are used to derived melt extent and duration over the entire Greenland ice sheet on a daily basis and are then compared with those obtained with a regional model (MAR), with the modeled net surface energy fluxes and with the trends of surface temperature collected along the coast at selected locations. Surface mass balance data of the Greenland ice sheet is also derived from the MAR model and compared with those from ground measurements performed on the ablation zone of the west Greenland ice sheet along the 67° N latitude circle, at distances of 6, 38 and 88 km from the ice sheet margin at elevations of 490, 1020 and 1520 m a.s.l.
Results are updated through the 2008 melting season and evaluated in the context of the 1979 – 2008 period.