

MODIS Snow and Ice Field Campaigns

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Primary Objective

- **To map the temporal and spatial variability of snow and sea ice on hemispheric, continental and large watershed scales**

Outline

- **Recent field campaigns**
- **Preliminary results from field campaigns**
- **Future work**

Snow and Ice Field Campaigns

- **Glacier National Park, Montana**
 - March 1991
 - February 1992
- **BOREAS (southern Saskatchewan, Canada)**
 - December 1992
 - February 1994
 - February 1996 (?)
- **Alaska**
 - April 1995

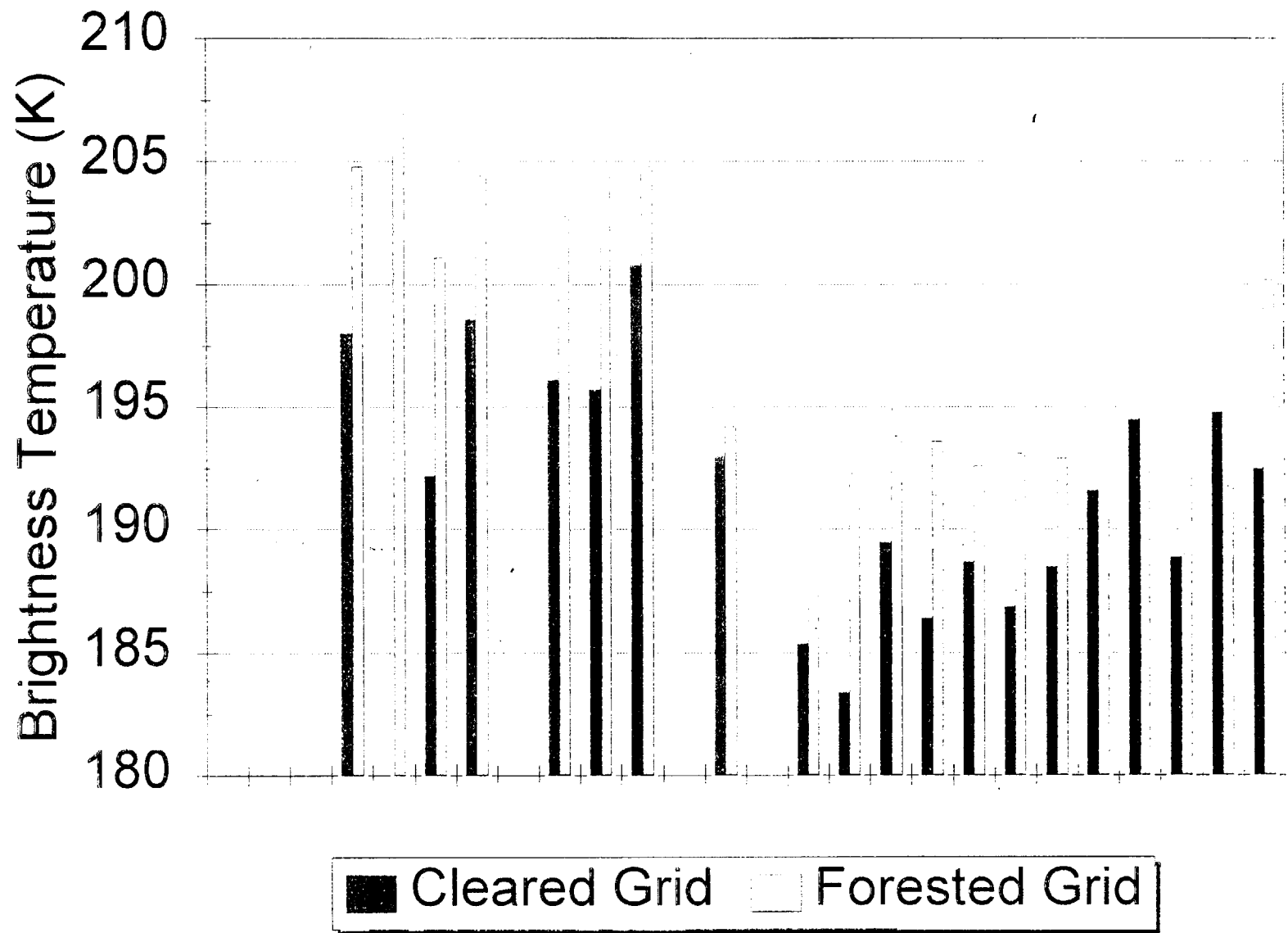
BOREAS

- **December 1992: ER-2 with MAS had mechanical problems; no data acquired; field measurements acquired**
- **February 1994: large field and aircraft campaign with MAS and MW sensors**
 - 2 ER-2 overpasses over study area
 - 14 Twin Otter flights with passive MW sensors
 - TM data acquired during study period
- **February 1996: MAS will not fly; field measurements will be acquired**

TOP



Time series of 85 GHz Brightness



BOREAS '96 (Feb.)

- **ASAS and AVIRIS**
-
- **PARABOLA**
-
- **Measure CO₂ and methane fluxes during snowmelt**

Future Work

- **Determine limitation of SNOMAP and MW algorithms in forested areas using BOREAS and Alaska mission data**
- **Determine limitation of SNOMAP under conditions of low solar illumination using TM and Alaska mission MAS data**
- **Work with Yoram Kaufman to calculate an atmospheric correction over snow and ice**