



**TOPIC: MEASURING THE SURFACE TEMPERATURE OF POLAR ICE SHEETS**

**PROJECT PERSONNEL:**

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**GENERAL BACKGROUND INFORMATION ON THE SUBJECT:**

How are the surface temperatures of large polar ice sheets, like those in Greenland and the Antarctic, measured?

Satellites can make observations over very large areas determining temperatures by measuring the amount of infrared or microwave radiation being emitted by the ice.

**TERMS YOU SHOULD KNOW (VOCABULARY):**

electromagnetic energy

infrared and microwave radiation

**WHY ARE WE STUDYING THIS IN THE POLAR REGIONS?**

long term temperature trends at the Earth's poles is an indicator of global climate change.

Polar warming can result in sea level rise, making large populated areas uninhabitable.

**HOW DOES THIS AFFECT US HERE IN THE UNITED STATES?**

Most of the nation's major cities and a significant fraction of the population lie on the coast that will be inundated.

**TO LEARN MORE ABOUT THIS TOPIC:**

[HTTP://EN.WIKIPEDIA.ORG/WIKI/SEA\\_LEVEL\\_RISE](http://en.wikipedia.org/wiki/Sea_Level_Rise)

[HTTP://FLOOD.FIRETREE.NET/](http://flood.firetree.net/)

[HTTP://WWW.SCIENCEDAILY.COM/RELEASES/2006/03/060308211836.HTM](http://www.sciencedaily.com/releases/2006/03/060308211836.htm)

[HTTPS://WWW.CRESIS.KU.EDU/RESEARCH/SATELLITEMEASUREMENTS.HT  
ML](https://www.cresis.ku.edu/research/satellitemeasurements.html)

[HTTP://NSIDC.ORG/DATA/DOCS/DAAC/NSIDC0002\\_SSMI\\_SEAICE.GD.HTML](http://nsidc.org/data/docs/daac/nsidc0002_ssmi_seaice.gd.html)