

# NASA'S SnowEx and GLOBE Mission EARTH working together to study Snow and Urban Heat Island



SnowEx Flight Plan for local region

On February 14, 2017, The University of Toledo hosted a webinar for teachers, students and scientists on **NASA'S SnowEx: NASA Airborne Snow Experiment** and **GLOBE Urban Heat Island Effect / Surface Temperature Campaign**. SnowEx led by Dr. Dorothy Hall, a Senior Scientist Emeritus at NASA / Goddard Space Flight Center is a NASA project to observe snow and ice in various regions of the US. One goal is to observe the ice on Lake Erie; the project changed its flight plans to go over Toledo and the NW Ohio and SE Michigan region for GLOBE students' research projects on urban heat island. The flight will occur sometime between February 20 to 24 around 3:00 pm.

Dorothy Hall

- \*Senior Scientist: Cryospheric Sciences Laboratory at NASA/ Goddard Space Flight Center
- \*130 publications
- \*1 book
- \*20 book chapters
- \*Fan of Frozen



Naval Research Lab P-3

**Urban Heat Island Effect**

Not all surfaces have the same temperature!

**Why collect surface temperature data?**  
To help verify surface temperature readings collected by NASA satellites.

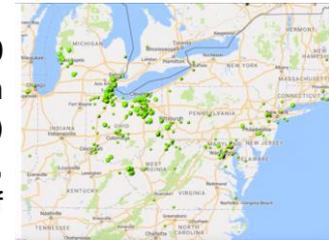
Landsat 8  
MODIS  
GOES 16 (R)

Find out more about NASA's MODIS imagery here:  
<http://modis.gsfc.nasa.gov/about>

Dr. Hall discussed the importance of snow water equivalent and the reasons NASA is developing techniques to observe it from satellites. Dr. Kevin Czajkowski from The University of Toledo is the chief scientist for GLOBE (Global Learning and Observations to Benefit the Environment) Urban Heat Island Effect /Surface Temperature Campaign. Dr. C discussed how the same imagery will be used to look at urban heat island in the Toledo area (southeast Michigan and Northwest Ohio). The webinar included a brief review of the GLOBE surface temperature protocol.

**Take 9 random surface temperature readings.**  
Take 9 random surface temperature readings within each study area.  
Each study area should be at least 50 meters square and have the same land cover.

The students were from schools in grades K-20 school systems: Toledo (Ohio) Public, Akron Public, Ida (Michigan) Public, Monroe (Michigan) Public and Parochial, Dearborn Heights (Michigan), Bowling Green University and The University of Toledo.



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To view the webinar, go to <http://tinyurl.com/globemissionearth>

