CERES Education and Outreach Update

Lin Chambers, NASA LaRC, Hampton, VA

S'COOL Team:

Tina Rogerson (ASDC), Sarah Crecelius, Camelia Deller,

Joyce Fischer, Preston Lewis, Susan Moore and Jay Madigan, SSAI

MY NASA DATA Team:

Kurt Hitke, Preston Lewis, Susan Moore, Dan Oostra, Penny Oots, SSAI

CERES Science Team Meeting
Paris, France
September, 2010
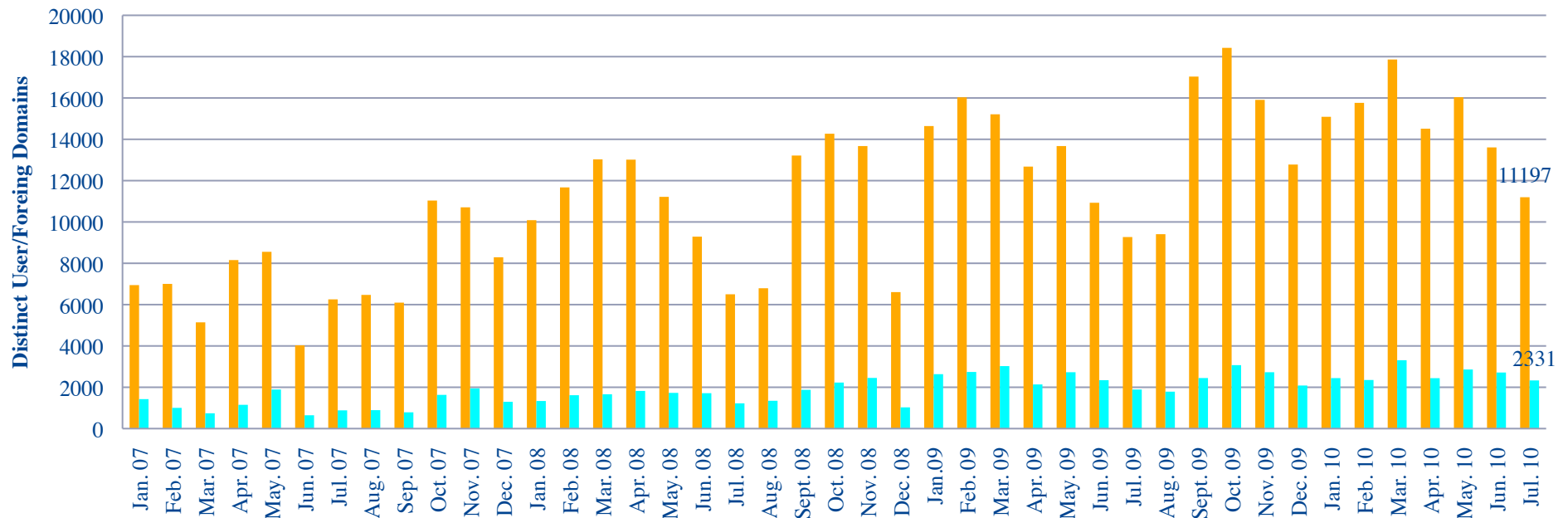
What is MY NASA DATA?

- Involve students in real science.
- Enable K-12 teachers and students, as well as citizen scientists, to explore the large volumes of data that NASA collects about the Earth from space.

- *Students use scientific inquiry and math skills as they access and display microsets of the Earth System.*
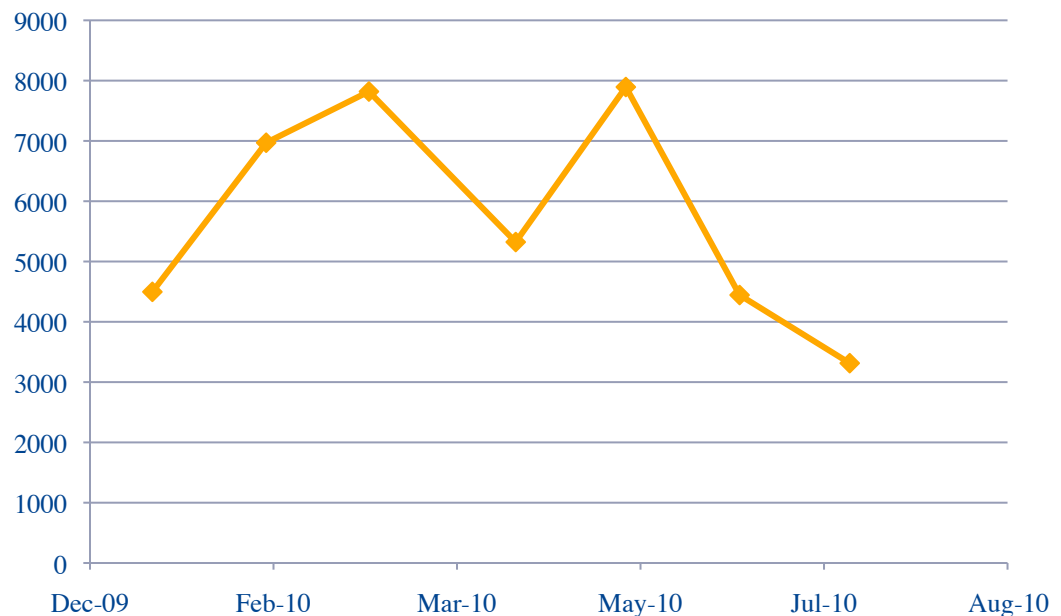
http://mynasadata.larc.nasa.gov

MY NASA DATA and CERES

- Project adopted by Aqua and Terra in latest Senior Review cycle

- Includes several CERES data parameters:
  - Albedo, Fluxes (EBAF & TRMM)
  - Surface Scene Type

- New Summer 2010 lesson plans use CERES data in addition to the 13 available

MND - Foreign Domains(Blue)/Distinct Users(Yellow)

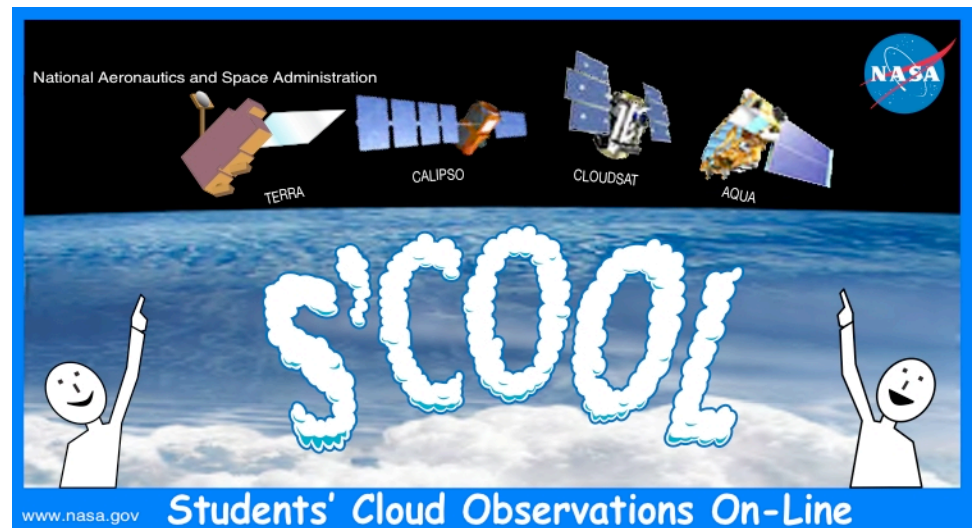# CERES Impact Measures: Lesson Accesses

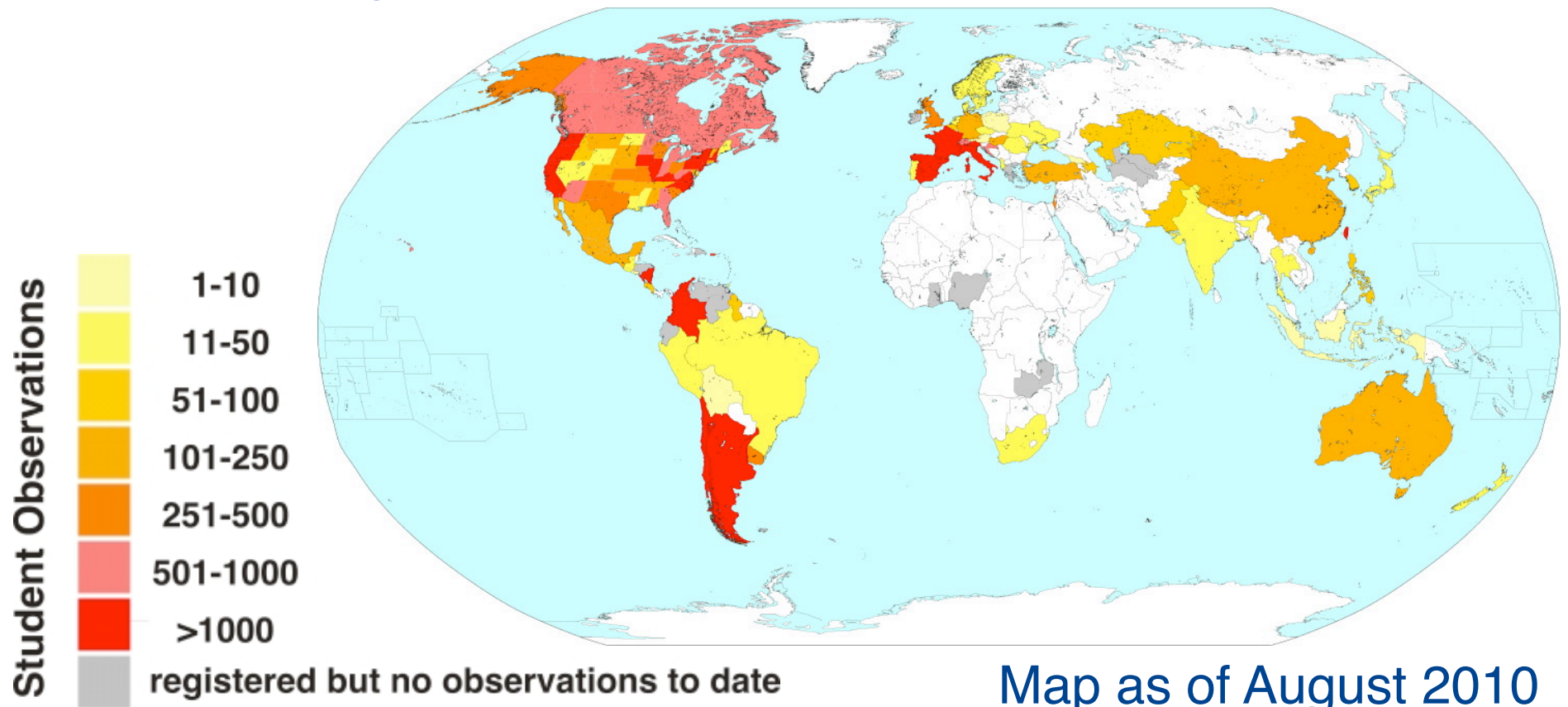

Lesson use peaks during school year

What is S'COOL?

- Education and Public Outreach arm of CERES
- Backbone of Terra/Aqua formal education effort
- A simple way to involve K-12 students in authentic science
- A source of validation data for the CERES cloud retrievals

http://scool.larc.nasa.gov

S'COOL Project

- > 85,700 observations from 56 countries and all 50 states
- 48 % from outside the US (77% US participants)
- > 3,000 registered participants from 80 countries

Student Observations

- 1-10
- 11-50
- 51-100
- 101-250
- 251-500
- 501-1000
- >1000
- registered but no observations to date

Map as of August 2010

Impact Measures

- ~30 requests for S'COOL materials since Apr. 2010 (average rate)

States "Top Five"	
▪PA	22%
▪VA	9%
▪PR	6%
▪CA	5%
▪NH	5%

Countries "Top Five"		
▪US	52%	↓
▪Colombia	18%	↑
▪Argentina	6%	
▪France	5%	↓
▪Taiwan	3%	

States "Bottom Five"	
▪North Dakota	14
▪DC	12
▪Virgin Islands	9
▪Guam	6
▪Northern Marianas	0

States – no change

Impact Measures (cont'd)

Database of observations - as of Aug. 27, 2010

- > 48,900 satellite correspondences (772 match both)
  - For 57% of ground observations
- >3,040 registered participants
  - 37% submitted data
- 80 countries
  - data from 56 countries (70%)

Summer People

- Annika Jersild – College of William & Mary, Teach for a Competitive Tomorrow
- Mark Marioneaux – Physics Teacher, Heritage High School, Newport News, VA, NSF Teacher Institute for Research in Physics, Hampton University
- Sue Hallstrom – Chemistry Teacher, Shawnee Mission High School, Kansas City, Endeavour Teacher Fellow
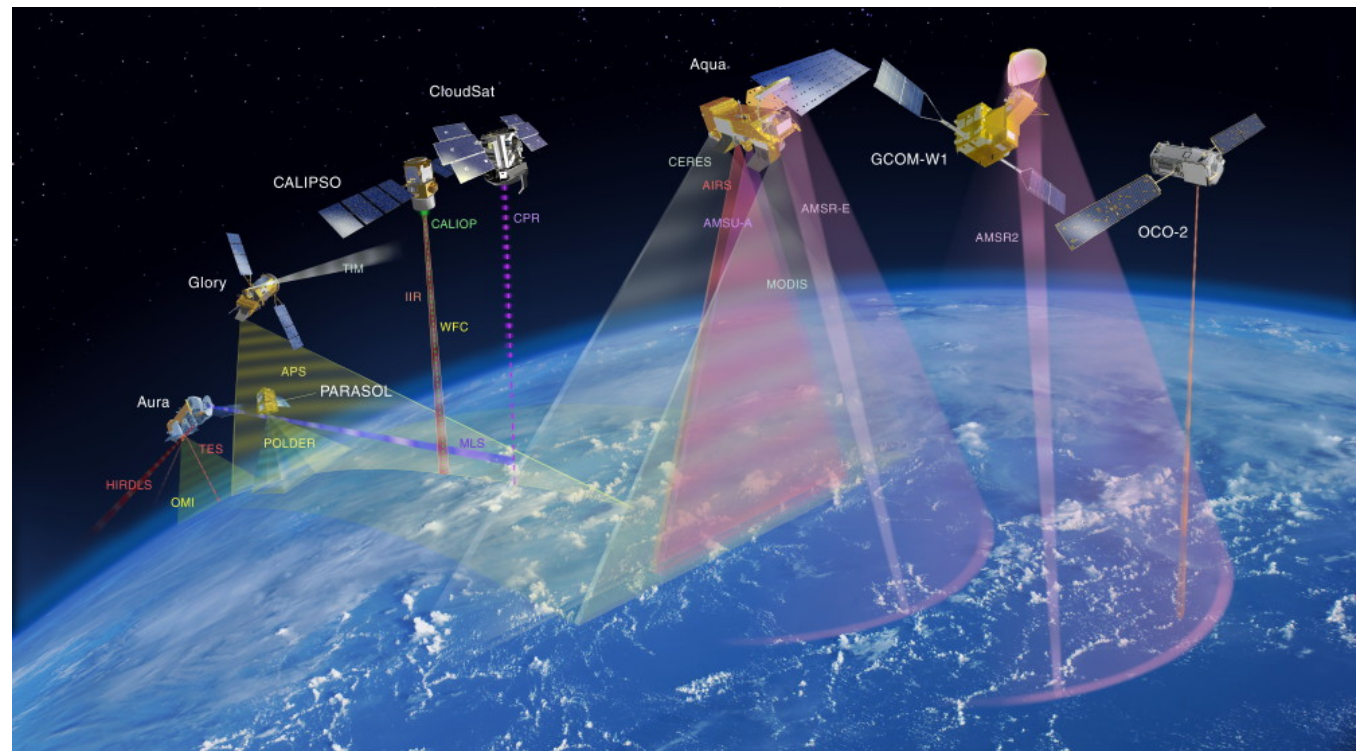- Rebecca Schnekser – 5th grade teacher, Virginia Beach

S'COOL Ambassadors

Thanks to Jerry Potter, Patrick Taylor and Shi-Keng Yang for offering to staff a S'COOL-related exhibit at the AMS Annual Meeting in January 2011.

New Initiative – A-Train

• Student Scientist Observation Campaign

• Oct. 18 – Nov. 5, 2010

• Developing blog for interaction

• http://a-train-neworleans2010.larc.nasa.gov/education.php

S'COOL Needs YOU!

- **Make S'COOL Rover observations!**
- **Participants in every state and >75 countries**
  - Offer to serve as a **resource to a local teacher**
  - Arrange a **S'COOL visit when traveling**
  - Provide **S'COOL info to teachers you know**
- **Presentation materials available**, with script suggestions
- **Help with translation of materials**
- **Serve as resource for scientific content questions sent in by participants**
- **Analyze some data!**