Supporting the A-Train Symposium through GLOBE and S'COOL

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NATIONAL AERONAUTICS
AND SPACE ADMINISTRATION

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A-TRAIN SYMPOSIUM

NEW ORLEANS October 25-28, 2010

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- NASA EDGE Details

Education

The International A-Train Science Symposium will be held in New Orleans October 25-28, 2010. In addition to the main science discussions, a number of activities are planned for K-12 teachers and students.
These include:

- one-day teacher workshops on remote sensing and use of satellite data in the classroom
- school visits from A-Train scientists on Friday morning (Oct. 29)
- a student-scientist GLOBE observation campaign
- educational webcasts from NASA Edge (Wednesday, Oct. 27, 4:30pm CDT: 1 hour live webcast from the A-Train Symposium!)

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GLOBE and S'COOL

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A-Train Educator Workshops

- Three one-day educator workshops conducted during symposium week
-GLOBE and S'COOL overview
-Share-a-thon (Aqua, CALIPSO, CloudSat, Aura, Glory)

- S'COOL practice observation (Aqua and Terra satellites)

A-Train Educator Workshops

Also served as **follow-up** to summer A-Train workshop (GLOBE Atmosphere and Aerosols protocol training in summer workshop)

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Education

Observation Campaign Details

When: Oct. 18 through Nov. 5, 2010.
Who: GLOBE schools, CloudSat Education Network, S'COOL Participants, and other interested teachers and students.
How:

1. Obtain A-Train satellite overpass times for your location
   a. http://scool.larc.nasa.gov/en_rover_overpass.html
   b. Choose Aqua, CALIPSO or CloudSat
      i. Aqua times are representative of Aura as well
      ii. CALIPSO and CloudSat will not have overpasses every day (unless you live near the North or South Pole!) since their instruments view a much smaller part of Earth.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

FIND IT @ S'COOL

+ GO

Home | When to Observe | What to Observe | Report Form | Database

Español | Francais

Find Satellite Overpass Times

The Terra overpass is in the morning, generally between 10 am and noon. The Aqua, CloudSat and CALIPSO overpass are in the afternoon, generally between 1 and 3 pm. The CloudSat and CALIPSO satellites see only a small sliver of the Earth on each orbit, so there may be as many as 16 days between overpasses. Please provide the information below needed to generate overpass times for your location.

Satellite: CERES on Aqua

☐ Do you want Nighttime Overpass Schedules?

Time Zone: Select One

Are you currently observing daylight saving time? ○ No ○ Yes

Email To Send Overpass Schedule To:

Find Satellite Overpass Times

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Satellite: CERES on Aqua

- CERES on Aqua
- CERES on Terra
- CALIPSO
- CloudSat

☐ Do you want Nighttime Overpass Schedules?

Time Zon

Are you currently observing daylight saving time? ○ No ○ Yes

Email To Send Overpass Schedule To:

Instructions to determine your latitude and longitude: Put your mouse cursor near your location and double click. The map display will move so that the selected point is in the centre. The latitude and longitude of the centre of the map is then shown below the map. To refine the accuracy of your site latitude and longitude, click on the plus sign Click the plus sign to enlarge the map scale so you can pin point your lat long location more accurately in the navigation boxes at the upper left side of the map. The scale will change so that you can home in accurately on your location. Once you have found the latitdue and longitude of your location enter them in the boxes below.

Latitude: (-90.00 to 90.00) Longitude: (-180.00 to 180.00)

Observations reported through

- CEN
- S'COOL
- GLOBE

2. Choose days to make GLOBE or S'COOL observations at A-Train times
3. Choose protocols to observe:
   a. Schools in the CloudSat Education Network and the S'COOL Project make their standard observations.
   b. GLOBE schools are also invited to submit any or all of the following:
      Atmosphere: clouds, aerosols, water vapor, relative humidity, precipitation, air and surface temperature, surface ozone
      Hydrology: Water Temperature
      Soils: Soil Moisture
      Earth as a System: Green-up/Green-down, Budburst
4. Report observations through the standard GLOBE / S'COOL / CEN data entry process.
5. Visit the virtual meeting site to contribute to the conversation between scientists, teachers and students; post photos of interesting observations; comment on the view from space versus the ground.
6. Comment on the experience through the post-event survey.

S'COOL

Students' Cloud Observations On-line

HOME | FOR PARTICIPANTS | FIND OUT MORE | FOR TEACHERS | FOR KIDS | ROVER

MESSAGE OF THE MONTH: Make S'COOL observations from anywhere!!! See our Rover pages....

Francais | Español | Deutsch | Italiano | 中文 | Thai

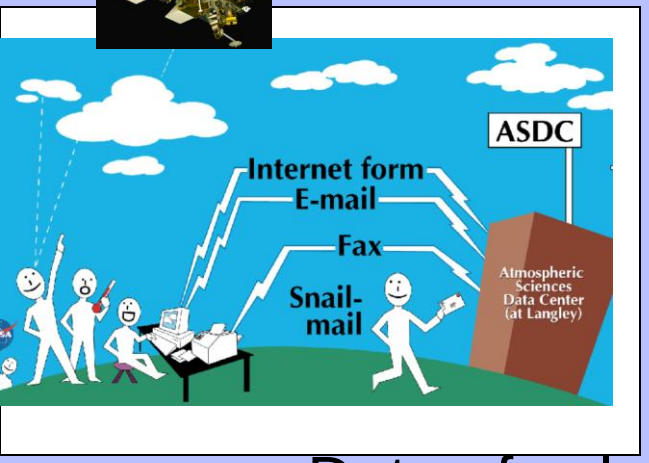
The S'COOL Project is ongoing, and we welcome observations either through the Rover website, or by registering as a S'COOL participant.
http://science-edu.larc.nasa.gov/SCOOL/register/

Please Click Here to visit our S'COOL YouTube page. On this page you will be able to see all of the S'COOL web site videos in one place, so that utilizing the information becomes that much easier in the classroom or anywhere else. Anytime there is new video that pertains to the S'COOL project it will be added to the site for ease of use. Through the use of YouTube the videos are in a much more user friendly format.

Number of unique page hits since 20 May 2009: **20387**

The S'COOL Project

Students provide ground observations for a satellite overpass



1. Determine satellite overpass time
2. Observe cloud properties
3. Transmit results to NASA
4. Compare to satellite-retrieved properties

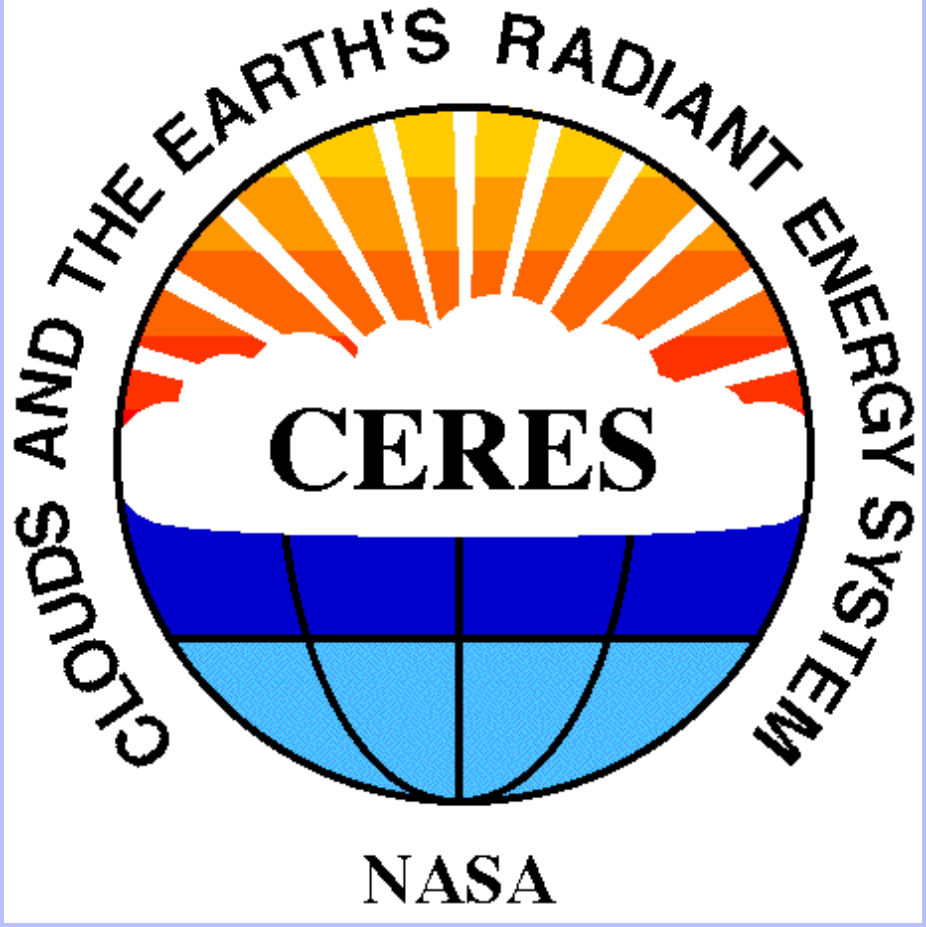
Data of value to scientists

(i.e., Chambers et al, 2004, Shiffman, 2005)

Real-world learning for students

NASA has a science project!

The name of this science experiment is



The CERES Experiment:

Question:

What is the Effect of Clouds on the Earth's Climate?

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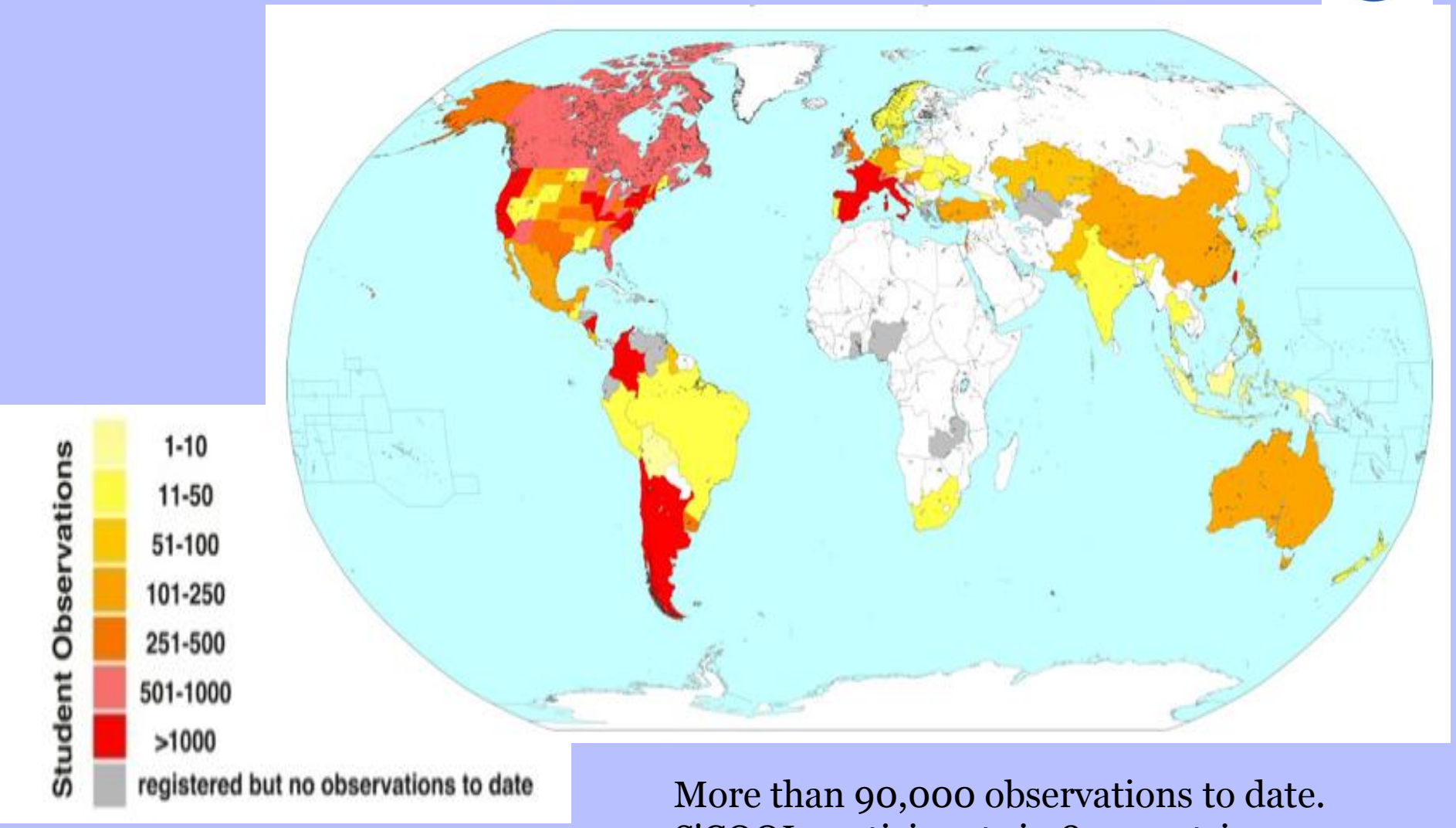
S’COOL around the World



More than 90,000 observations to date.
S'COOL participants in 82 countries.

National Aeronautics and Space Administration

FIND IT @ S'COOL: all words any words exact phrase

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Roving Cloud Observations for S'COOL

Welcome to NASA Langley Research Center's cloud observation project, S'COOL. This site provides all the information that you need to make and report a cloud observation at a non-permanent (i.e., roving) observation site, such as a field trip, vacation, or just an occasional observation from your backyard. We welcome participation from any interested observers, especially from places where official weather observations are few and far between.

Follow the links above to get satellite overpass times, learn about making observations, report an observation, and explore the database of reported observations (which will include corresponding satellite data once they are available). A Tutorial can help you get started.

For permanent, school or museum-based observation sites, please visit the main web page for the project, Students' Cloud Observations On-Line, to register to participate.

S'COOL is a project that aims to collect data on cloud type, height, cover and related conditions from all over the world. Observations are sent to NASA for comparison to similar information obtained from satellite. Reports from a wide range of places are helpful to assess the satellite data under different conditions.

Many people take for granted how powerful clouds are in our atmosphere. It is clouds, in part, that affect the overall temperature and energy balance of the Earth. The more we know about clouds, the more we will know about our Earth as a system. The S'COOL observations help us to validate satellite data and give us a more complete picture of clouds in the atmosphere and their interactions with other parts of the integrated global Earth system. .

A-TRAIN SYMPOSIUM

NEW ORLEANS + October 25-28, 2010

October 18 through November 5, 2010 a rover observation campaign was conducted in association with the 2010 New Orleans A-Train Symposium. You can continue to make S'COOL observations at the A-Train overpass times through this Rover website.

S'COOL Ground Observation & Satellite Results

Latitude	Longitude	City	State	Country
12.100000	-86.200000	Managua		Nicaragua

Ground Observation - 81845				Aqua Satellite				
Date: 2009-07-02		Local Time: 13:00:00	Universal Time: 19:00:00	Date: 2009-07-02		Universal Time: 19:00:00		
Opacity	Cloud Cover	Type	Visualization		Altitude (km)	Opacity	Cloud Cover	Phase Temp(K)
					10.47	Opaque 13.17	Partly Cloudy (5% to 50%) 14.02	ice 236.11
Opaque	Overcast (95% to 100%)	Altostratus			7.46	Translucent 7.48	Mostly Cloudy (50% to 95%) 61.73	mixed 257.57
Opaque	Partly Cloudy (5% to 50%)	Stratocumulus			2.32	Translucent 3.61	Partly Cloudy (5% to 50%) 6.85	water 285.44

Persistent Contrails: 00

Short-Lived Contrails: 00

Surface Observations:	Snow/Ice: No Standing Water: No Muddy: No Dry Ground: Yes Leaves on Trees: Yes Raining or Snowing: No

Temperature: 32.00 C
Barometric Pressure: 1011.00 hPa
Relative Humidity: 55.00

View Corresponding Aqua

MODIS Satellite Image

Vertical Profiles Along the MODIS Centerline

Cloudsat Quick Look
Cloudsat Tutorial
CALIPSO Expedited Browse Image
CALIPSO Tutorial

Comments: No comments provided by participant.

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Activity Blog

A-Train Symposium Activity Blog

Home Blogs Bookmarks Groups Members Pages Wire

Welcome A-Train Symposium Participants

The purpose of this site is to allow you to contribute to the conversation between scientists, teachers, and students.

We'd love to see your best and most interesting observations! Feel free to comment on the view from space versus the view that you see every day on the ground.

How to obtain A-Train satellite overpass times? Go to: http://scool.larc.nasa.gov/en_rover_overpass.html

Watch the NASA EDGE Live 1-hr Webcast!

The A-Train Symposium in New Orleans - Part 1 (10/26/10)

The A-Train Symposium in New Orleans - Part 2 (10/27/10)

Questions?