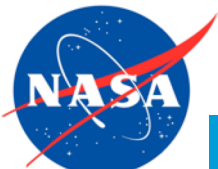




# ***GOES-R Field Campaign Archive and GLM data portal***

**2018 GLM Annual Science Team Meeting  
11-13 September 2018**

Helen Conover  
Information Technology & Systems Center  
University of Alabama in Huntsville  
[helen.conover@uah.edu](mailto:helen.conover@uah.edu)





# GOES-R Field Campaign Data Archive Status

- Acquired initial quality controlled datasets from all instrument teams
  - *Please let me know if you plan to provide any data updates*
- Field campaign archive to be transferred to GHRC DAAC in 2019
  - Working with instrument teams to develop metadata and documentation
- Data and information sharing continues via the Field Campaign Portal

[04/22/17-04/23/17] GOES-R GLM Validation Flight Over Huntsville, AL Area

View Edit Photos Rearrange Delete Revisions

Submitted by Lucie2006 on Tue, 03/20/2018 - 15:00

**Flight Times**  
2017/04/22 19:28 - 2017/04/23 01:20

**Mission Reports**  
[Plan of the Day](#)  
[Daily Weather Briefing](#)  
[Daily Weather Briefing on Second Day](#)  
[ER-2 Flight Report](#)  
[Mission Scientist Report](#)

**Mission Objective**  
Conducted a GLM validation flight over the Huntsville, Alabama area track-NOAA P-3. Circles are the 50 and 100 nmi range rings for the interferometer just north of the LMA.

**Data**

- 📁 CPL
- 📁 CRS
- 📁 FECS
- 📁 GCAS
- 📁 LMA
- 📁 Reprocessed\_GLM
- 📁 S-HIS

Flight summary page with links to mission reports and data



# GOES-R PLT FC Archive Data

Instrument	Dates	Status
AVIRIS NG	ABI flights	L1 and L2 ortho and unortho data + geolocation, documentation
AVIRIS	GLM flights	L1 (all flights) and L2 (non cloud only) ortho data + geolocation, documentation
CPL	all flights	L1B and L2 data, images, documentation, read software
CRS	4/11 – 5/17	L1B data and imagery, preliminary
GCAS	3/21-5/14	Selected flights
FEGS	3/21-5/17	Pulse and flash data, documentation
LIP	3/21 – 5/17	Data, plots, documentation
S-HIS	3/23, 3/28	Preliminary data
ER-2 Navigation	3/23-5/17	IWG format



# GOES-R PLT FC Archive Data

Instrument	Dates	Status
Ivanpah	3/23, 3/28	spreadsheet of AVNG results, final report
Red Lake	4/4-4/6	spreadsheet and ASCII data file
SURFRAD	3/27-4/12	QCRAD and RadFlux
EarthNetworks	3/1-5/31	
LMA networks	3/1 – 5/31	COLMA, DCLMA, KSCLMA, NALMA, OKLMA, SOLMA, WTX
ABI, reprocessed	3/23, 3/28, 4/13	
GLM, reprocessed	3/21-5/17	L1B and L2 data, reprocessed but not corrected for time of flight



# GOES-R Field Campaign Portal



The GOES-R Post Launch Field Campaign took place from March to May of 2017. Team members can use this portal to access data, reports, and other documents generated during the project.

**Navigation**

- Portal Home
- Image Gallery
- Related Links
- Project Documents
- LMA Data
- Files
  - GLM Workspace
  - ABI Workspace
  - Quicklooks
  - File Naming Convention
  - Upload Instructions
- Mission Reports
  - Plan of the Day
  - Weather Forecast
  - ER-2 Flight Reports
  - Mission Scientist Reports
  - Instrument Status Reports
- User List
- Contact

**View** Edit Photos Rearrange Delete

**GET DATA**

### Flight Summaries

Title	Flight Times
[03/21/17-03/22/17] ER-2 GOES-R Checkout Flight	03/21/2017 - 18:44 - 03/22/2017 - 01:22
[03/23/17] ER-2 GOES-R Sonoran Desert Overflight and Ivanpah Playa	03/23/2017 - 17:26 - 03/23/2017 - 23:11
[03/28/17] ER-2 GOES-R Sonoran Desert Overflight, Ivanpah Playa, and Red Lake Playa	03/28/2017 - 16:28 - 03/28/2017 - 22:50
[04/06/17] GOES-R Phase 2 Check Flight	04/06/2017 - 16:27 - 04/06/2017 - 20:15
[04/11/17] GOES-R Transit Flight from Palmdale, CA to Warner-Robbins, GA	
[04/13/17] GOES-R Nighttime Flight over the Gulf of Mexico	04/13/2017 - 01:23 - 04/13/2017 - 05:17
[04/16/17] GOES-R Nighttime Flight over Central Oklahoma	04/16/2017 - 06:31 -

Navigate directly to reports, etc.

Download data, organized by instrument

Flight summary pages with access data and reports, organized by flight

<https://goes-r.nsstc.nasa.gov/home/goes-r-field-campaign-portal>



# Overview of Portals

GOES-R Field Campaign Portal

GLM Cal/Val Portal

Datasets

Laser Beacon Project



Home

User

Register for New Account

Log in

PLT Field Campaign Information and Data Sharing

Cal/Val Info and Tools

Access Lighting Data

Laser Beacon Tests for Geolocation

Email to request account [GOESR\\_IT@itsc.uah.edu](mailto:GOESR_IT@itsc.uah.edu)

<https://goes-r.nsstc.nasa.gov/home/>



# GLM Cal/Val Portal

- One stop shop for lightning science data
- Core functions
  - Provide lightning team access to GLM Level 0, Level 1 / Level 2, and many reference data sets from a single web site
  - Provide basic tools for data discovery and access
  - Host or provide pointers to GLM Cal/Val tools
- Target audience
  - GLM Cal/Val community (includes EUMETSAT, InPE, Environment Canada, and University partners), not general public
  - ***Password protection*** for restricted data, specific user permissions for different data sets



# GLM Cal/Val Portal - Data



- Lightning data available from MSFC:
  - GLM L0 and backgrounds
  - GLM L1, L2
  - GOES-R Field Campaign data
  - TRMM LIS, ISS LIS, NA LMA and DC LMA (publicly available from GHRC DAAC)
  - NLDN, GLD360, ENTLN (commercial data available at GHRC DAAC with access restricted to specific users)
- *Bulk data downloads via HTTPS (e.g., curl, wget)*



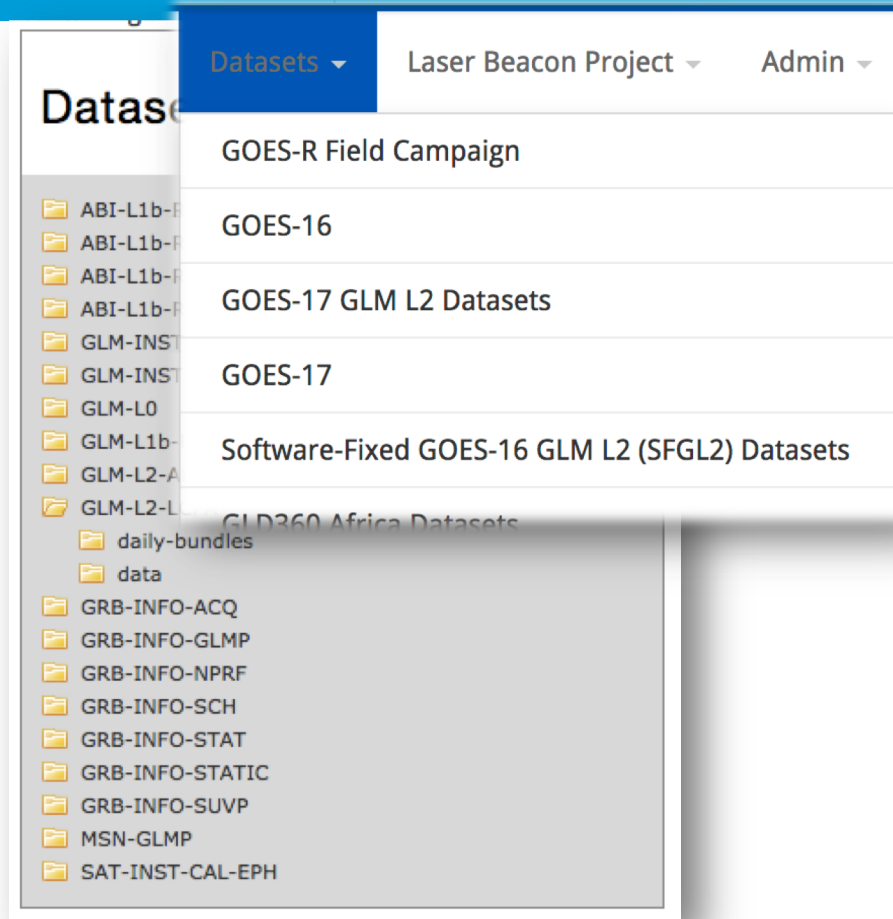


# GLM Data on the Portal



- Daily manual acquisition of GLM L0 data from NOAA LZSS
- Automated routine acquisition of GLM and other data from NOAA PDA every 20 seconds
- Download 20-sec GLM L0 and L2 files or L2 daily tar bundles here
- Until public release by NOAA
  - **For cal/val only**
  - **Do not redistribute**

<https://goes-r.nsstc.nasa.gov/home/download-datasets>





# GLM Cal/Val Portal – Sharing Information



Share data samples and cal/val analyses here

Upload new file

Sort by author, title or date uploaded

GLM Cal/Val Uploads

Upload New File

Title	Author	Date	File Attachment
Performance of optimal lightning emission height	Katrina Virts	2018-05-04	<ul style="list-style-type: none"> <li>Optimal emission height performance - maps</li> <li>Optimal emission height performance - histograms</li> </ul>
Initial time & location accuracy for GOES-17	Katrina Virts	2018-04-26	<ul style="list-style-type: none"> <li>GLM-17: statistics for 2018-04-16 to 2018-04-24</li> <li>GLM-17: offset vectors for 2018-04-16 to 2018-04-24</li> <li>GLM-16: statistics for 2018-01-11 to 2018-04-18</li> <li>GLM-16: offset vectors for 2018-01-11 to 2018-04-18</li> <li>GLM-16: distance diagram for 2018-01-11 to 2018-04-18</li> </ul>

GLM Cal/Val Portal

- Forums
- Lightning Data
- LMA Data
- Cal/Val Tools
- Cal/Val Uploads**
- 2017 Meeting Agenda

<https://goes-r.nsstc.nasa.gov/home/glm-cal-val-uploads>



# GLM Cal/Val Portal – Sharing Tools



## GLM Cal/Val Shared Tools

Tool	Description	Code Language
CompareLSS	<b>Compare</b> Lightning Location System tool performs shallow/deep dives of GLM data using wide range of ground-based datasets discussed in RIMP.	MATLAB
Imatools	Analyzes LMA data [sort VHF source data into flashes; calculate flash areas, volumes, and channel lengths; produce gridded products; time series statistics of flash rate and size data; simulate LMA performance].	Python

GLM Cal/Val Portal ▾ Datasets ▾

- Forums
- Lightning Data
- LMA Data
- Cal/Val Tools**
- Cal/Val Uploads GLM Cal/Val Tools
- 2017 Meeting Agenda

Bruning/TTU [eric.bruning@ttu.edu](mailto:eric.bruning@ttu.edu)

## GLM Cal/Val Private Tools

Share analysis tools here

<https://goes-r.nsstc.nasa.gov/home/glm-cal-val-tools>

Coming soon!

- Similar to GLM portal's "one-stop-shop" for lightning, but for a public audience
- To include short description and purpose of use with links to more info, data, and (maybe) relevant papers
- Will supplement GHRC's lightning archive with links to additional data
  - Will include public GLM data from NOAA
  - *If anyone has public data they want to make sure are included in the list, please contact GHRC: [support-ghrc@earthdata.nasa.gov](mailto:support-ghrc@earthdata.nasa.gov)*



# Questions?

...

Contact [GOESR\\_IT@itsc.uah.edu](mailto:GOESR_IT@itsc.uah.edu)