# Geostationary Lightning Mapper Query Tool

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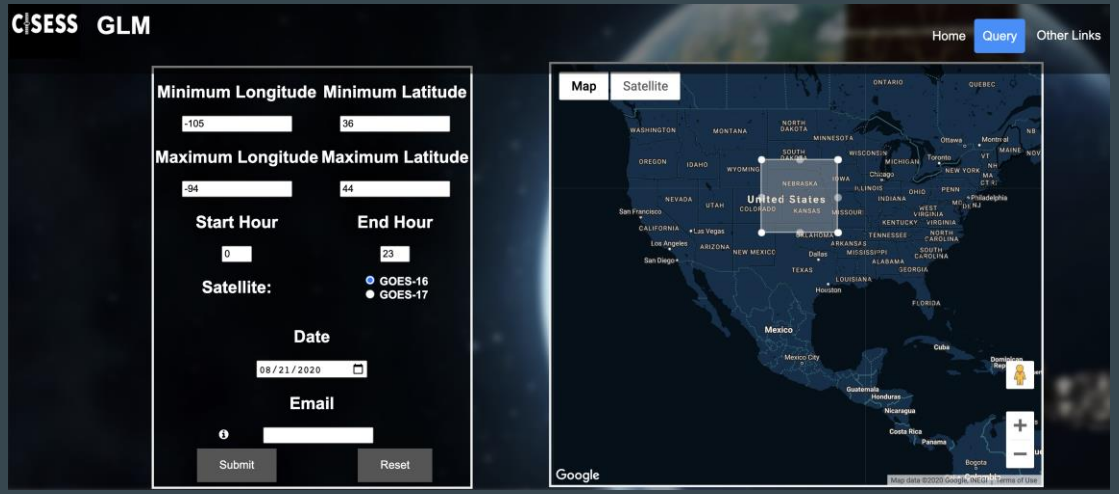
CISESS

# Query Tool Users

- Intended for users that do not require the full content of the GLM Level 2 (L2) files
- National Weather Service (NWS) Weather Forecast Offices (WFOs) forecasters reviewing previous convective cases
- Broadcast meteorologists interested in recent storm statistics
- Fire managers monitoring for lightning-ignited fires

# Query Tool Guide

- Website Address: https://lightning.umd.edu/projects/website/query.html
- Specify geographic domain by inputting coordinates or by dragging box
- Specify which Geostationary Lightning Mapper (GLM): GOES-16/-17
- Input the date and time and desired email address for data to be sent
- User receives a csv file (locations and times) visualizations

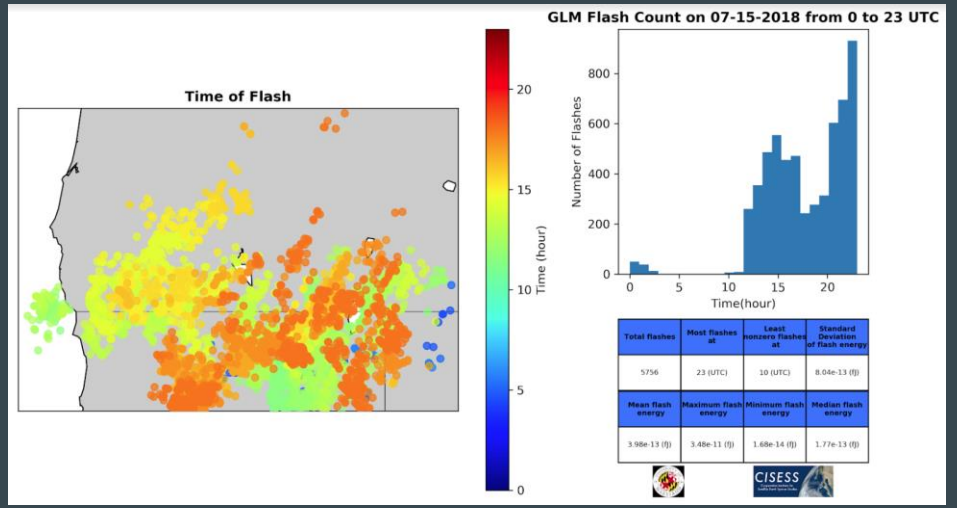


# Query Tool Functionality

- Query tool reads user inputs, acquires the appropriate GLM data, and generates a visualization with statistics and a csv with the location and time of each flash
- User is sent an initial email stating the request has been received, then a second email with the generated products attached once processing has completed
- Multiday queries will generate an email for each day containing an individual data file and visualization
- Processing takes 5-30 minutes depending on the length of time and area covered

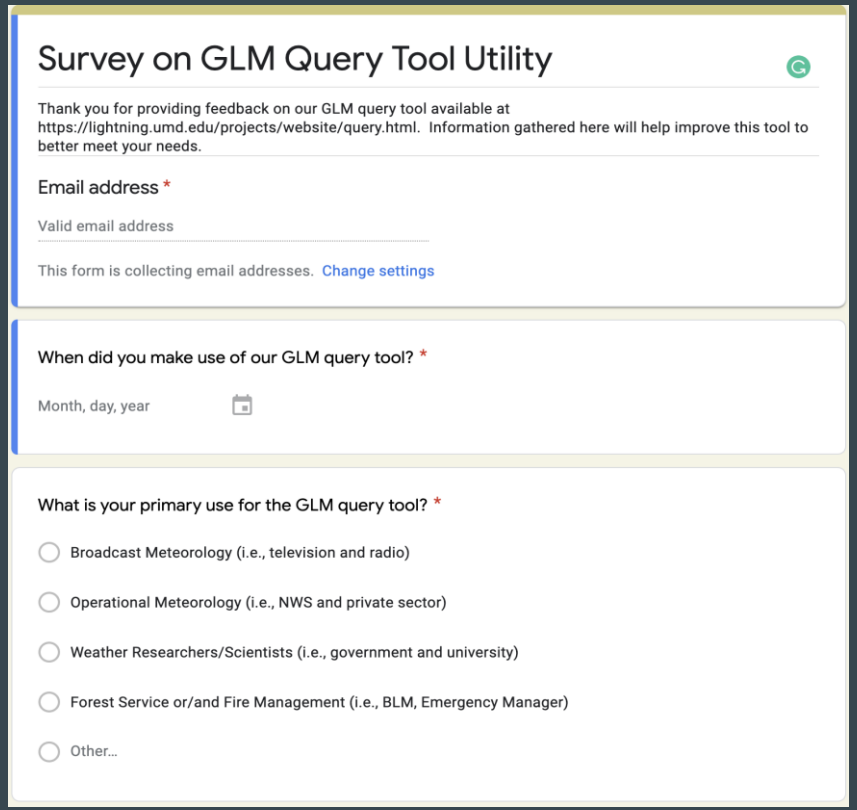
# Query Tool Output

- Visualization attached to email reply
  - Flash locations color coded by time of day (may replace with density map)
  - Hourly histogram
  - Table with basic statistics
- Easy to use csv file generated with the location and time of each flash




| year | month | day | hour | minute | second | latitude | longitude | flash energy |
|---|---|---|---|---|---|---|---|---|
| 2020 | 9 | 9 | 0 | 0 | 0 | 28.09273 | -82.5791 | 1.32E-13 |
| 2020 | 9 | 9 | 0 | 0 | 20 | 31.54951 | -78.2905 | 6.34E-13 |
| 2020 | 9 | 9 | 0 | 0 | 20 | 27.22787 | -82.2305 | 2.88E-13 |
| 2020 | 9 | 9 | 0 | 0 | 20 | 27.46377 | -82.4552 | 1.29E-13 |
| 2020 | 9 | 9 | 0 | 0 | 20 | 31.53765 | -78.2606 | 9.19E-13 |
| 2020 | 9 | 9 | 0 | 0 | 40 | 27.47665 | -81.9825 | 1.17E-12 |

# Query Tool User Feedback Survey: shorturl.at/clrBH



Survey on GLM Query Tool Utility

Thank you for providing feedback on our GLM query tool available at https://lightning.umd.edu/projects/website/query.html. Information gathered here will help improve this tool to better meet your needs.

Email address *

Valid email address

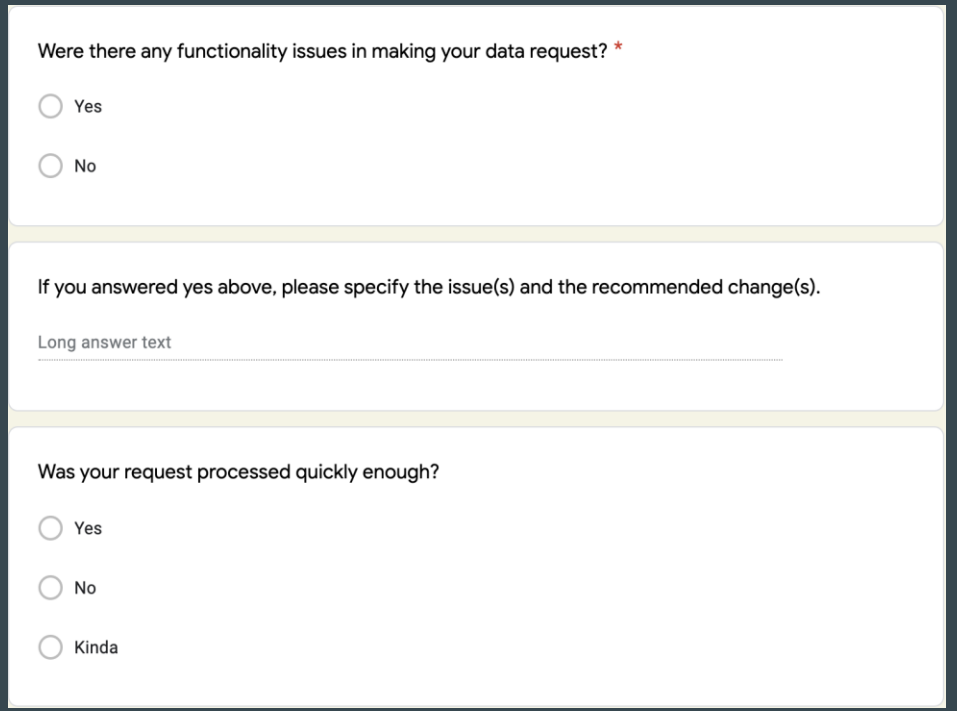
This form is collecting email addresses. Change settings

When did you make use of our GLM query tool? *

Month, day, year

What is your primary use for the GLM query tool? *

- Broadcast Meteorology (i.e., television and radio)
- Operational Meteorology (i.e., NWS and private sector)
- Weather Researchers/Scientists (i.e., government and university)
- Forest Service or/and Fire Management (i.e., BLM, Emergency Manager)
- Other...



Were there any functionality issues in making your data request? *

- Yes
- No

If you answered yes above, please specify the issue(s) and the recommended change(s).

Long answer text

Was your request processed quickly enough?

- Yes
- No
- Kinda