Little League Sluggers

Student Direction: In groups of 3-4 students, answer the following question, filling in the sections. Be sure to site evidence from your sources.

Background Information:

We are Little League Sluggers Inc. and have been told it is our responsibility to set up the National Little League Championship to be held in Orlando, Florida next July. This is an exciting endeavor however, Florida is known for severe weather. Everyone knows Lightning strikes are quite frequent in the month of July, however, the National Little League society wants to plan the event in a family friendly city. That is why we are looking at Orlando as the location for the upcoming Championship.

There are two systems we are considering. The first has been in use and the second is getting ready to be launched by satellite in 2015. We need you to evaluate each system as to each of their effectiveness.

Using the sources provided or other relevant sources, decide which system for lightning detection should the baseball company use for next year's tournament? Give at least three reasons, with evidence, as to why you have made your choice.

The Question: Using the sources provided or other relevant sources, decide which system for lightning detection should the baseball company use for next year's tournament?

The Claim (Which satellite does your group think will give the best data to keep the players safest against possible lightning strikes?)

The Evidence (In your research, what evidence does your group have to support the claim?)

The Justification of the Evidence (Why does your group think the evidence chosen supports the claim?)

Weather DATA:

*Review the following sites for current weather data in Florida

http://www.aprsfl.net/weather/lightning/

weather.weaterbug.com

http://www.intellicast.com/Storm/Severe/Lightning.aspx

Currently the national average for Tornado warning lead-time is only 14 minutes

GOES-R data: see websites below and data provided.

http://www.goes-r.gov/

http://www.goes-r.gov/products/baseline-lightning-detection.html

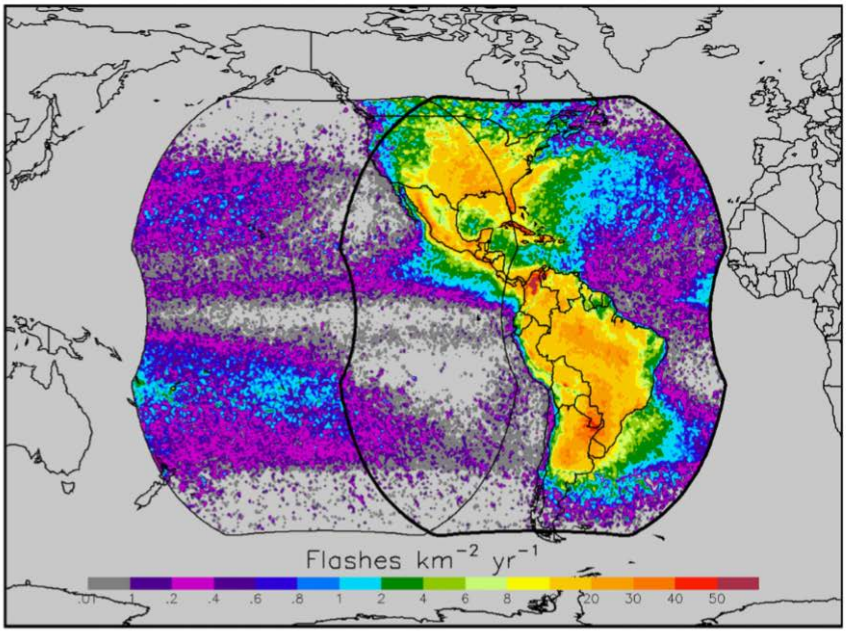
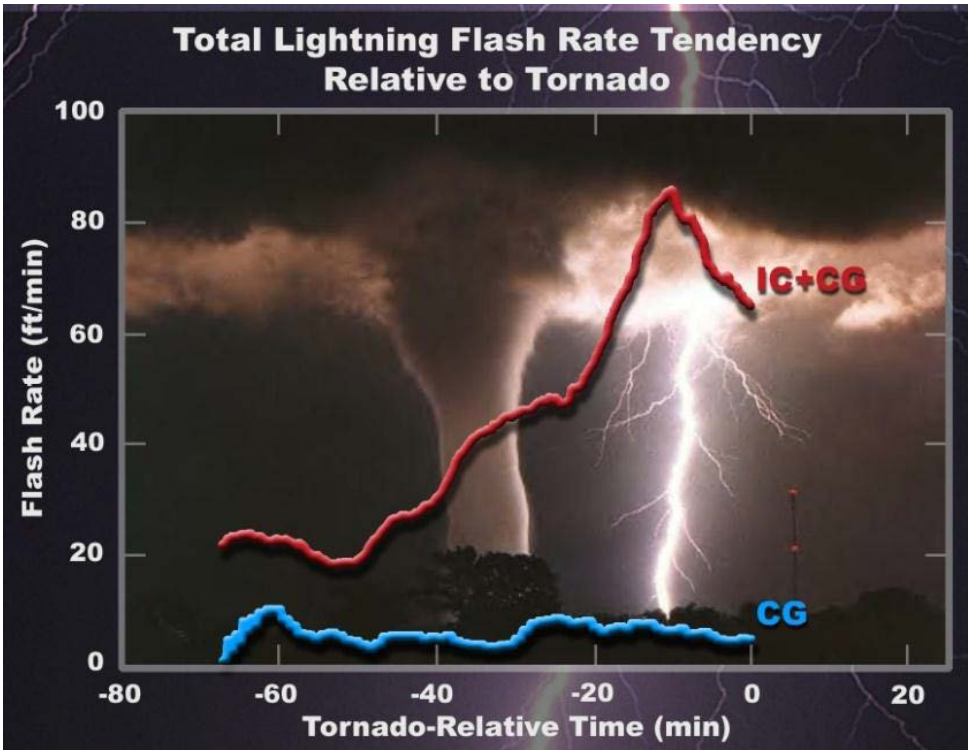


Fig. 1. Expected field-of-view of the Geostationary Lightning Mapper (GLM) from the east (bold outline) and west (thin outline) positions. The lightning statistics are derived from measurements from the LIS (January 1998–December 2010) and the Optical Transient Detector (OTD) (May 1995–March 2000) (Cecil et al., 2013–this issue).

Table 3 shows data from the GOES-R satellite.

TABLE 3. Skill scores and average lead times using the sample set of 711 thunderstorms for both total lightning and CG lightning, correlating trends in lightning to severe weather.

	POD	FAR	CSI	HSS	lead time (all)	lead time (tornado)
Total lightning	79%	36%	55%	0.71	20.65 mins	21.32 mins



When asked about the GOES-R GLM capabilties compared to existing satellites one scientist said “Total lightining data preceeded the CG network (NLDN) anywhere from 10-40 minutes. I was able to quickly determine when flash rate was significantly increasing, and then compare with satellite and updraft/downdraft parameters for a nice big picture.”