Round Table:

Cloud Electrification Process and Lightning Detection Systems

Discussion

- CHUVA Datasets

- GOALS of CHUVA

- GLM – Proxy Data

- How the CHUVA/GLM Campaign can help us to increase our knowledge about lightning and electrification process. Which lessons do we take and what we can do next.

- Data set release
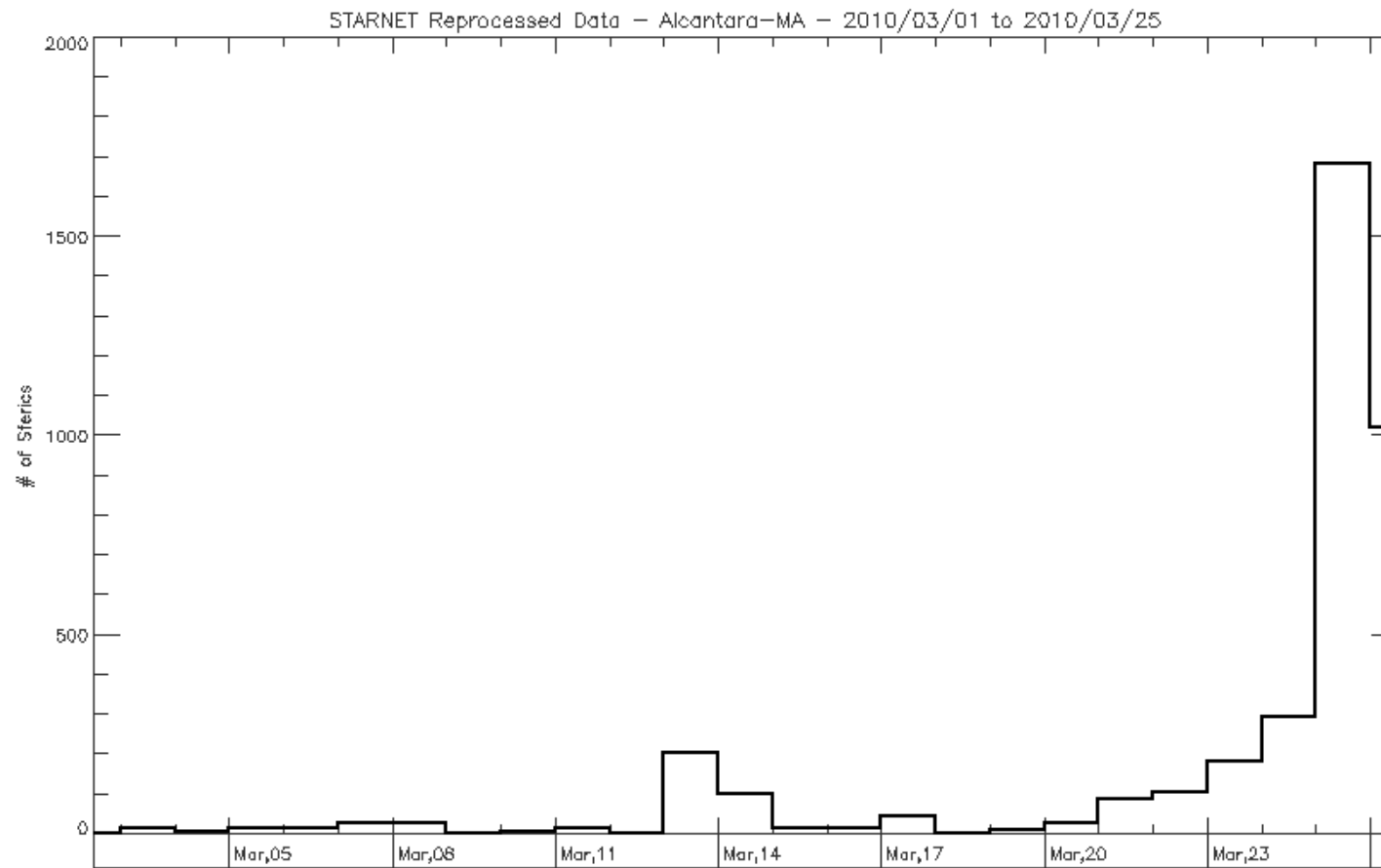
- Golden Case studies

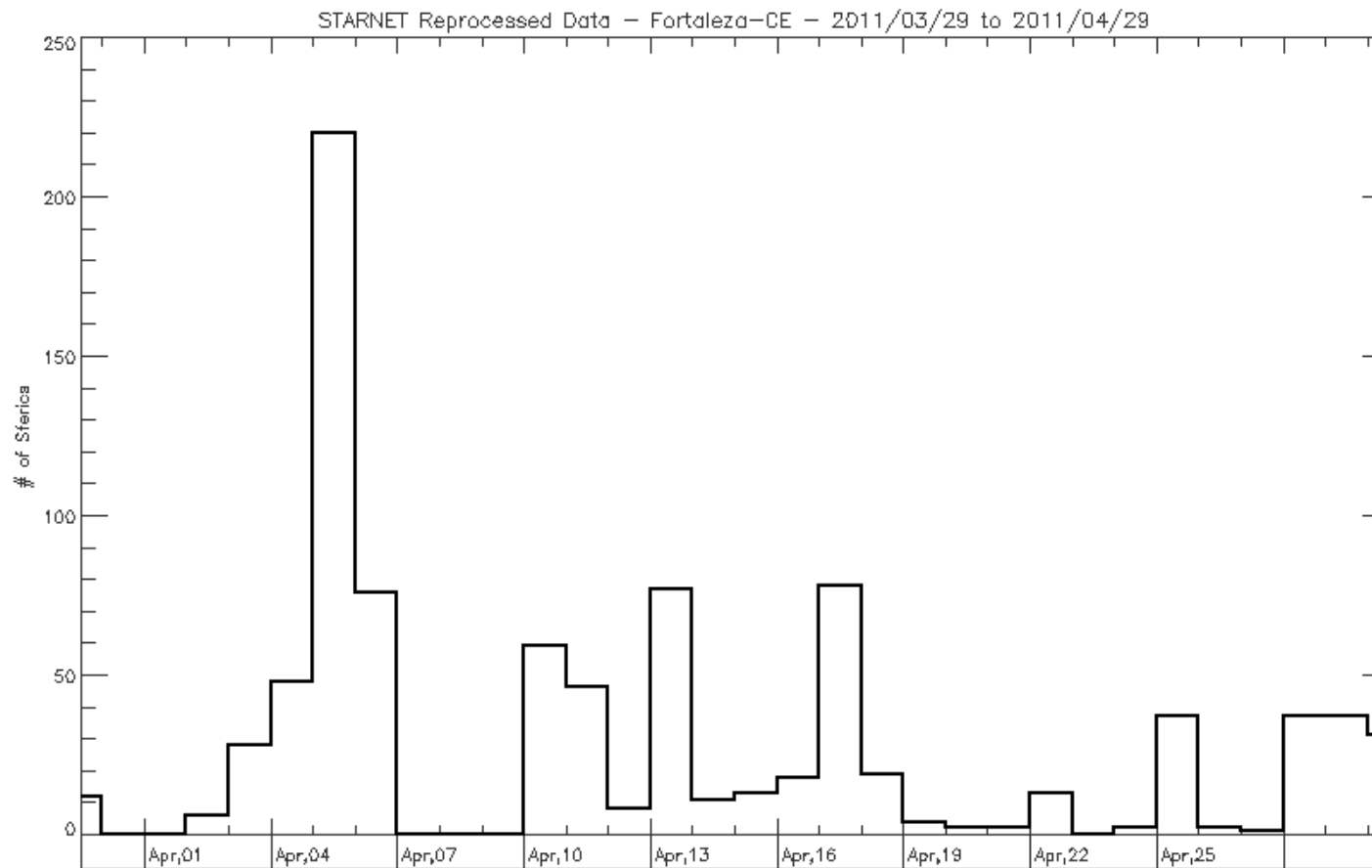- Go-Amazon

CHUVA

Lightning Measurements - STARNET

During the campaign – RealTime
After Campaign – Reprocessed Data set
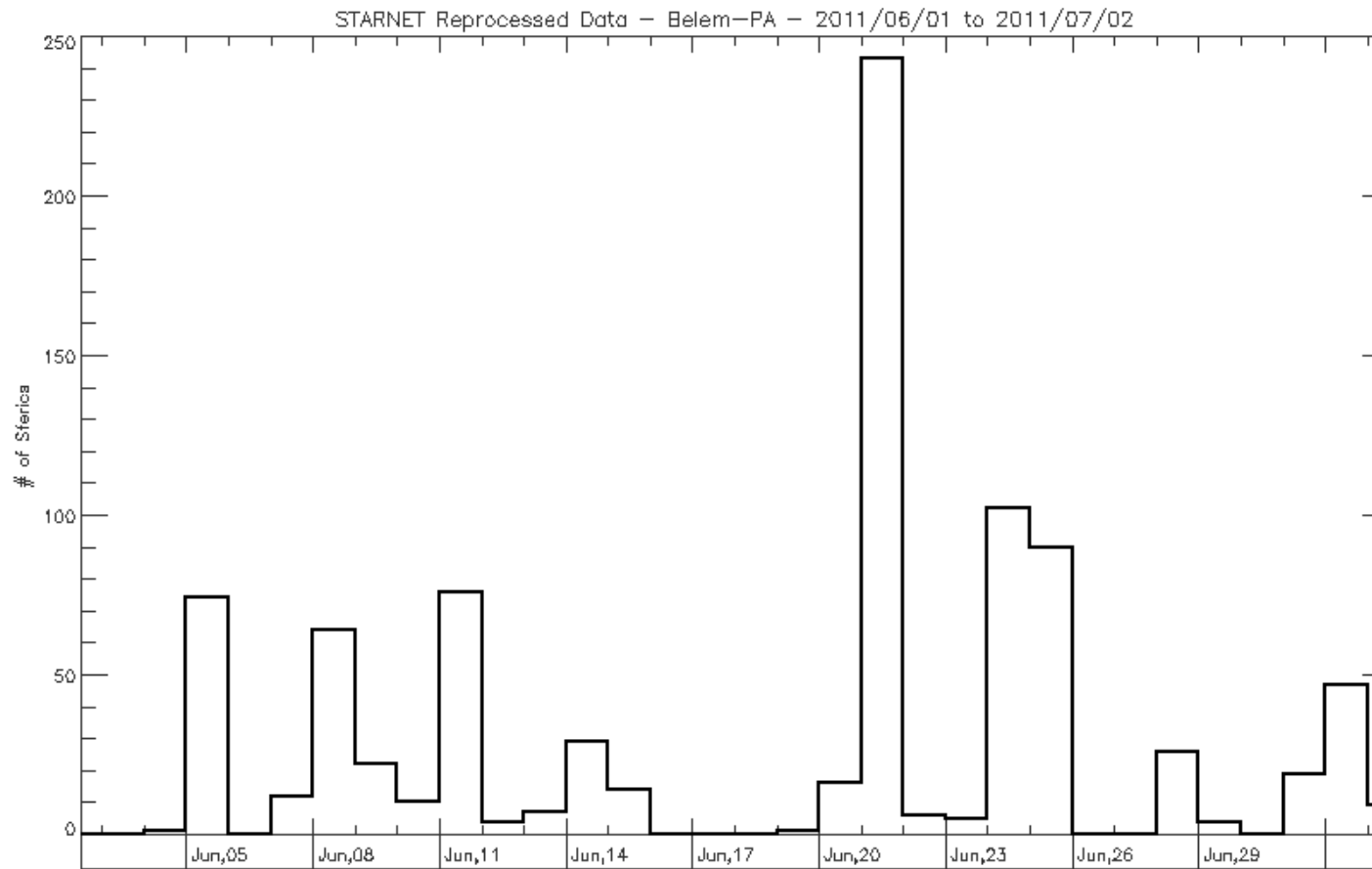
Alcantara, Fortaleza, Belém,
Vale and Santa Maria

Alcantara

STARNET Reprocessed Data — Alcantara-MA — 2010/03/01 to 2010/03/25

Fortaleza

STARNET Reprocessed Data — Fortaleza-CE — 2011/03/29 to 2011/04/29

Belém

STARNET Reprocessed Data — Belem—PA — 2011/06/01 to 2011/07/02

Vale

STARNET Reprocessed Data — Vale do Paraíba-SP — 2011/10/31 to 2011/03/31

Santa Maria

STARNET Reprocessed Data — Santa Maria-RS — 2012/11/06 to 2012/12/22
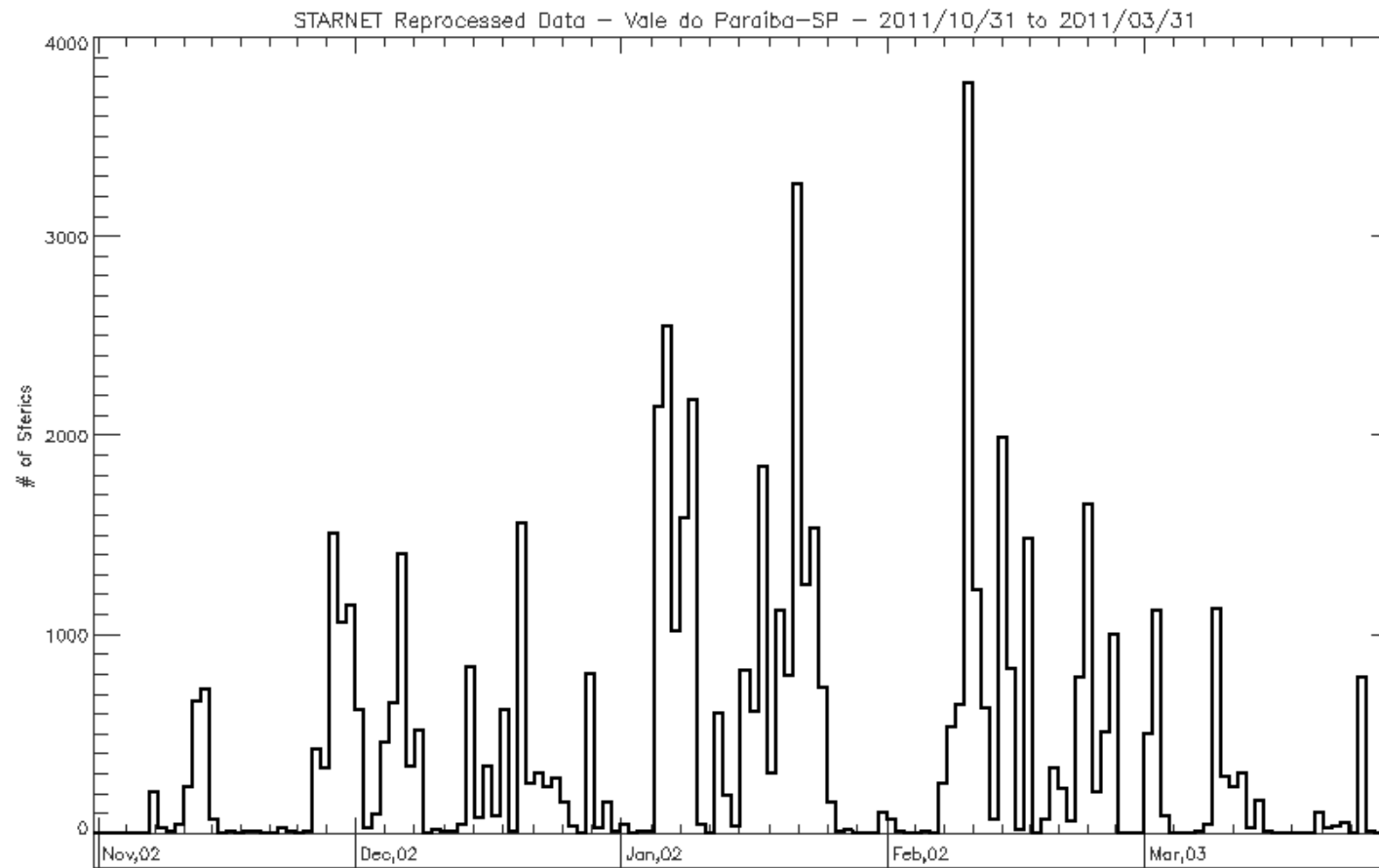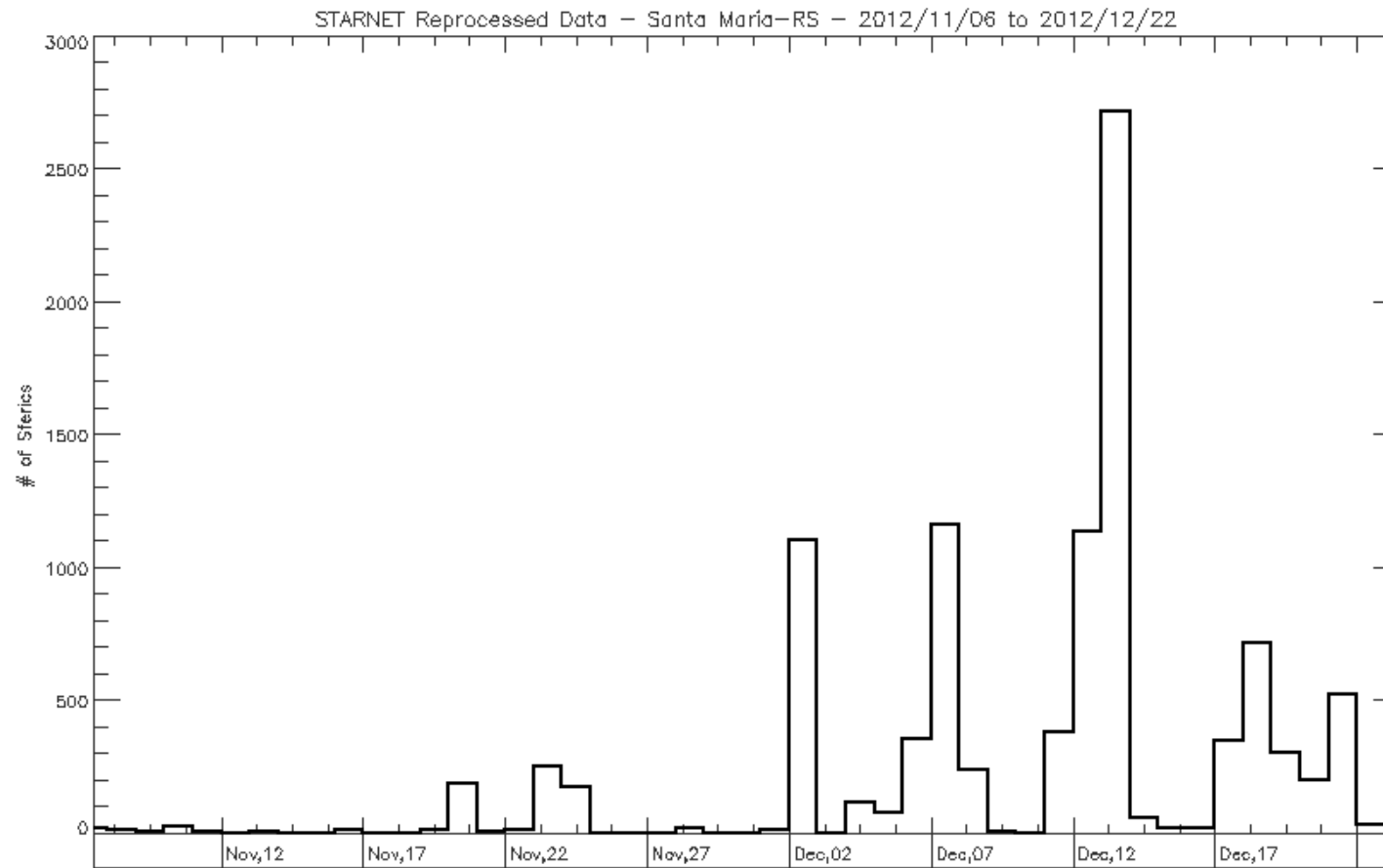
CHUVA – Field Mills

Fieldmill data validation status

campaing	site	level 0	level 1	level 2
Belém	Aeroporto	OK	OK	OK
	Outeiro	OK	OK	OK
	Benevides	OK	OK	OK
Vale do Paraíba	Aeroporto	OK	OK	OK
	Binfa	OK	OK	OK
	Pequenópolis	OK	OK	OK
	Meteorologia	OK	OK	OK
	Nova dutra	OK	OK	OK
	IEAV	OK	OK	OK
	IAG	OK	OK	OK
Santa Maria	CRS-INPE	OK	no	OK
	Geotérmico	OK	no	OK
	Ed. Física	OK	no	OK
	Jd. Botânico	OK	no	OK
	Fitotecnia	OK	no	OK

CHUVA-GLM
Level 1a and 1b

- **Lightning Mapping Array**   **[2011-10-24 to 2012-03-31]**
- **LINET (EUMETSAT/DLR)**   **[2011-12-10 to 2012-03-31]**
- **TLS200 (Vaisala)**   **[2012-01-01 to 2012-03-31]**
- **ENTLN (EarthNetworks)**   **[2011-11-01 to 2012-03-31]**
- RINDAT (INPE)   [2011-11-01 to 2012-03-31]
- STARNET (USP)   [2011-11-01 to 2012-03-31]
- WWLLN (Univ. Washington)   [2011-11-01 to 2012-03-31]
- GLD360 (Vaisala)   [2011-11-01 to 2012-03-31]
- ATDnet (MetOffice)   [2011-11-01 to 2012-03-31]
- TRMM-LIS   [2011-11-01 to 2012-03-31]
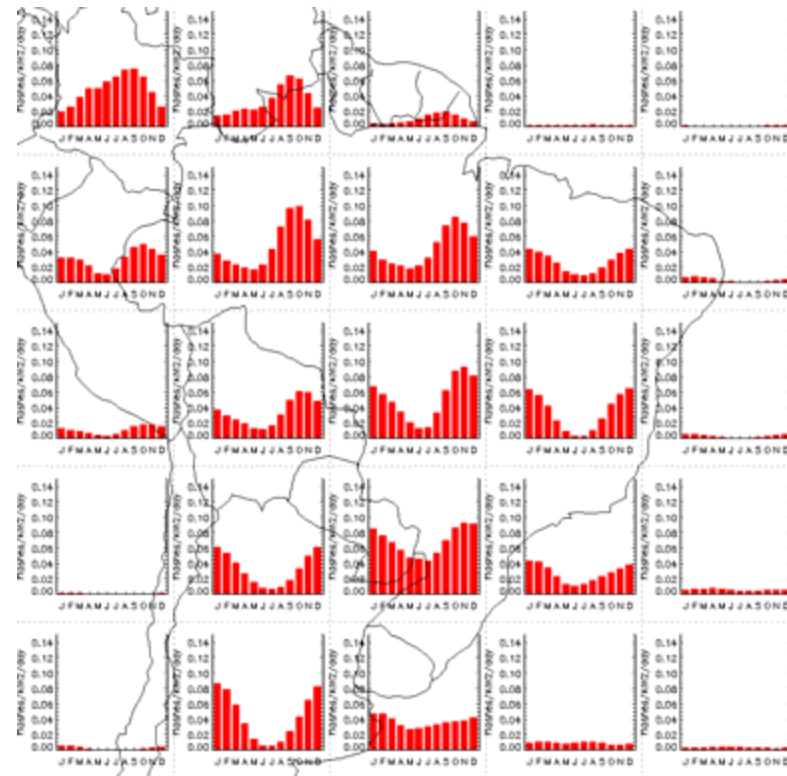
Other Lightning Measurements

- High Speed Cameras – RAMMER – Antonio Saraiva (Vale)

- High Speed Cameras and Slow/Fast Antennas – Marcelo Saba (Vale/São Paulo)

- High Speed Cameras for Sprites – Fernanda São Sabbas (Santa Maria Campaign)

- Field Mills in São Paulo - Rosângela

CHUVA:
Electrification Process: Moving from Clouds to Thunderstorms
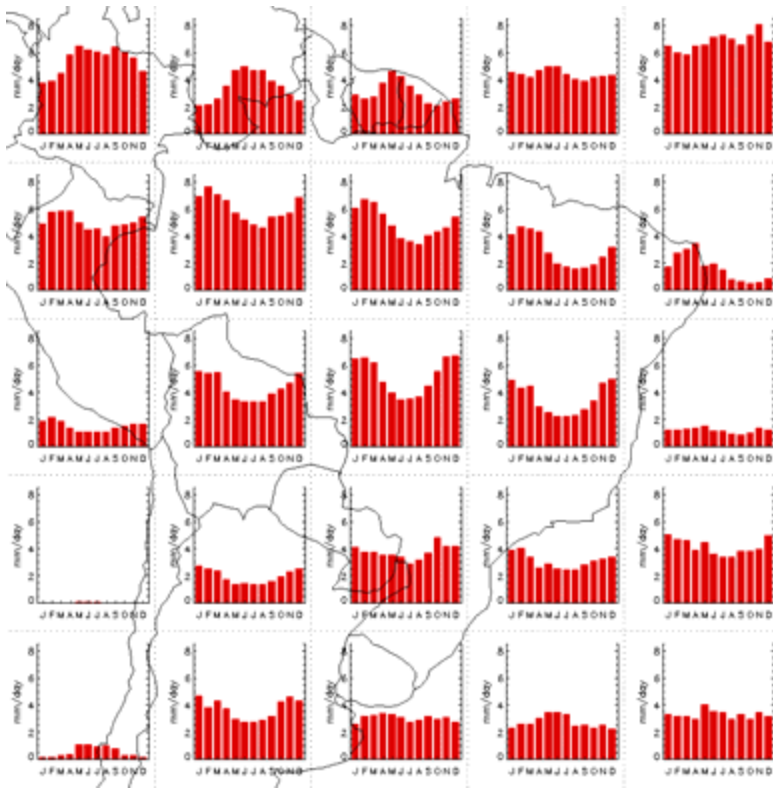
Precipitation

Lightning

Goals of CHUVA

- How cloud microphysics and electrification processes evolves during the cloud life cycle?

- Build a data base of cloud properties including associated electrification features.

- Describe the temporal evolution of the electrical field during the thunderstorm development in conjunction with polarimetric variables, lightning discharges and their effects in the upper atmosphere signaled by Sprites and other Transient Luminous Events.

- Depict the temporal evolution of the lightning activity, cloud area, surface rainfall and rainfall vertical structure.

- Characterize the thunderstorm season over Brazil.

GLM-Proxy data

Lessons

- How the CHUVA/GLM Campaign can help us to increase our knowledge about lightning and electrification process.

- Which lessons do we take from this campaign and what can we do next?

Data release

- So far, LMA, LINET and STARNET can be available by today.

- Do we set January 2014 to release all LLS to the general public?

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- PUBLICATIONS:
    - ????

Golden Cases

- For proxy / LISxLLS intercomparisons:
  - 15 LIS overpasses:
    - 10 Feb 2012
    - 27 Mar 2012

- For more LLS intercomparisons
  - Suggestions???

Go-Amazon 2014/2015.

- Anyone interested?