

Measurements of electric field on Aragats and correlations with short and long lasting TGEs

**Hripsime Mkrtchyan
Yerevan Physics Institute**

- *Electric field disturbance measured by three electric field mills*
- *Thunderstorm Ground Enhancement (TGE) : short and long events*
- *Lower positive charge region*

From June to August

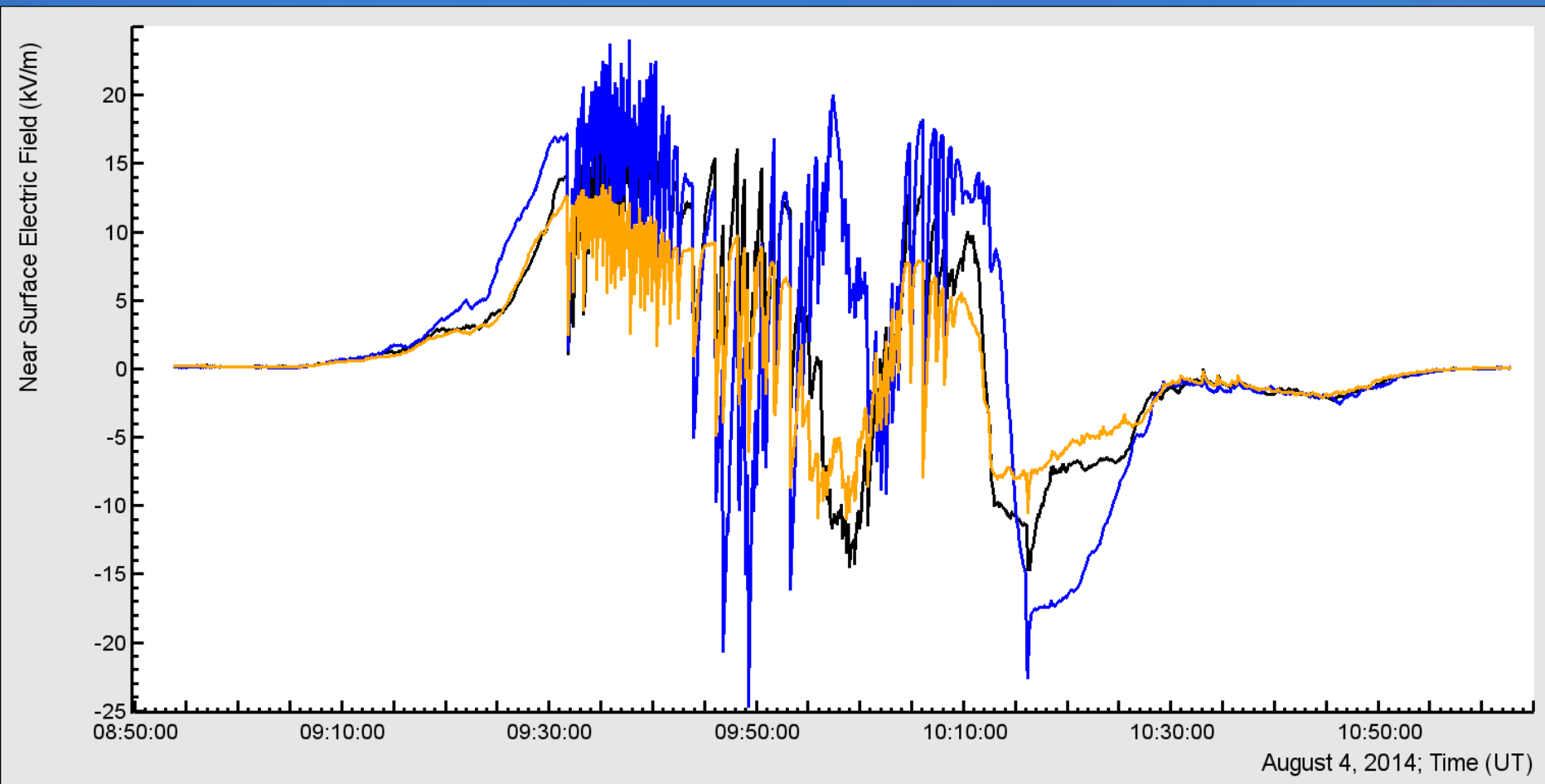
Long and short events
23

Only long events
11



Boltek
EFM-100
Gamma -
3172
Maket -
3199
Meteo -
3226

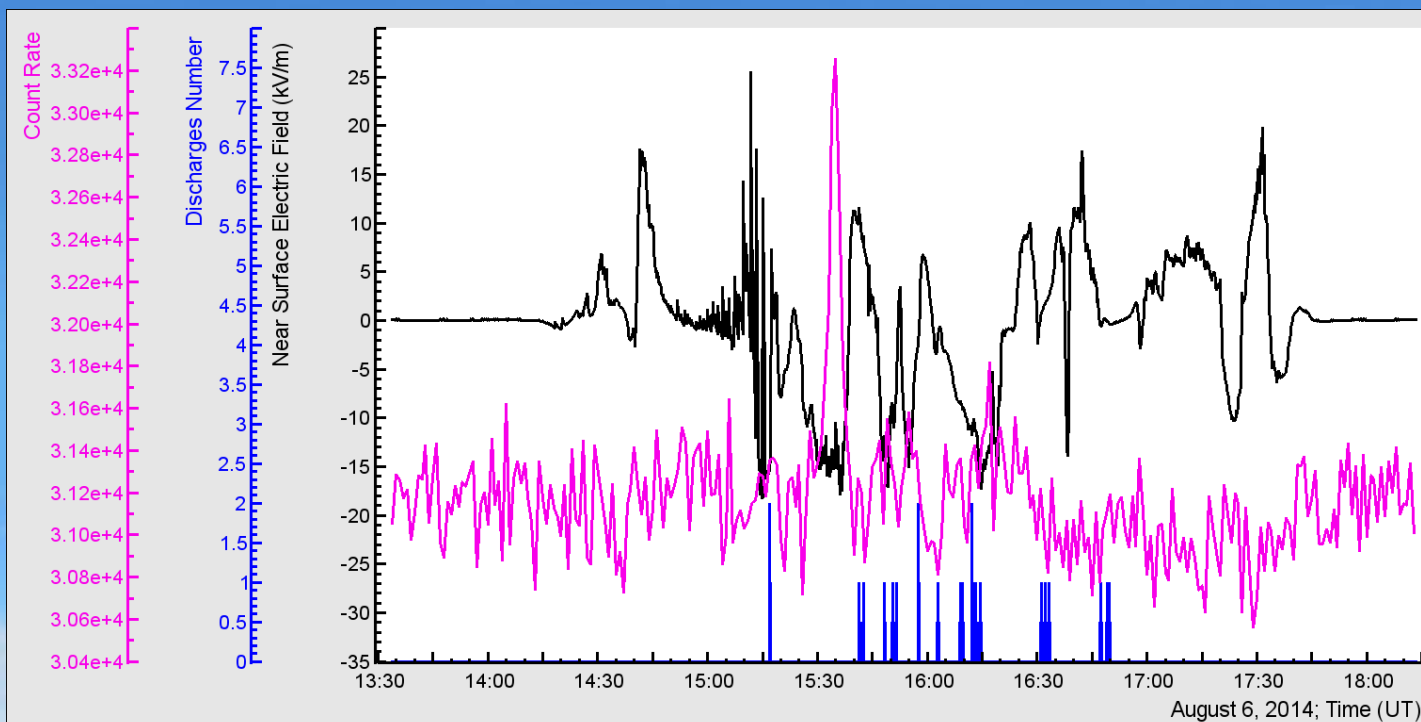
Measurements by 3 electric field mills



Outside 3 cm plastic scintillator detectors



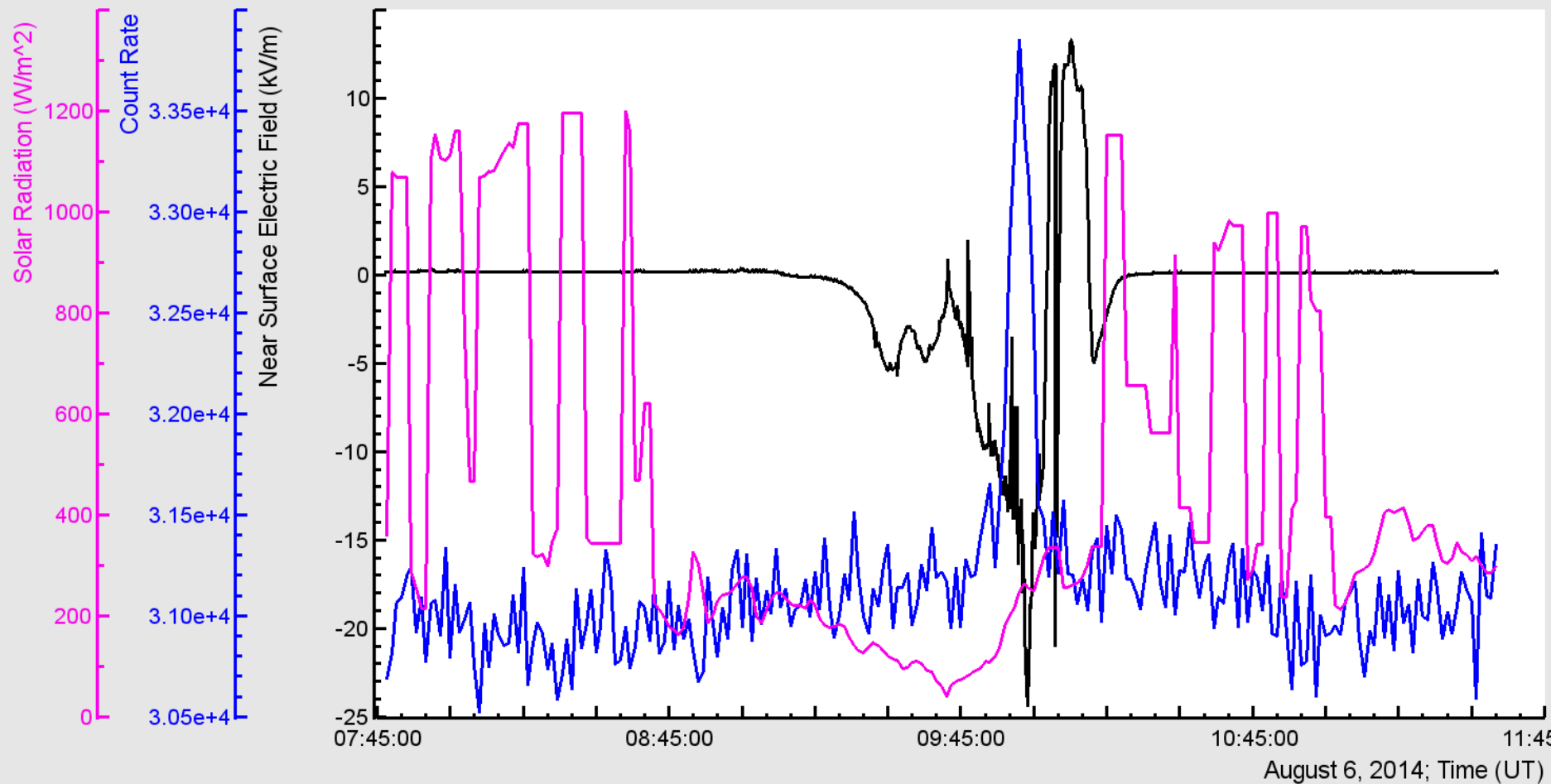
Short TGEs
~ 10 minutes

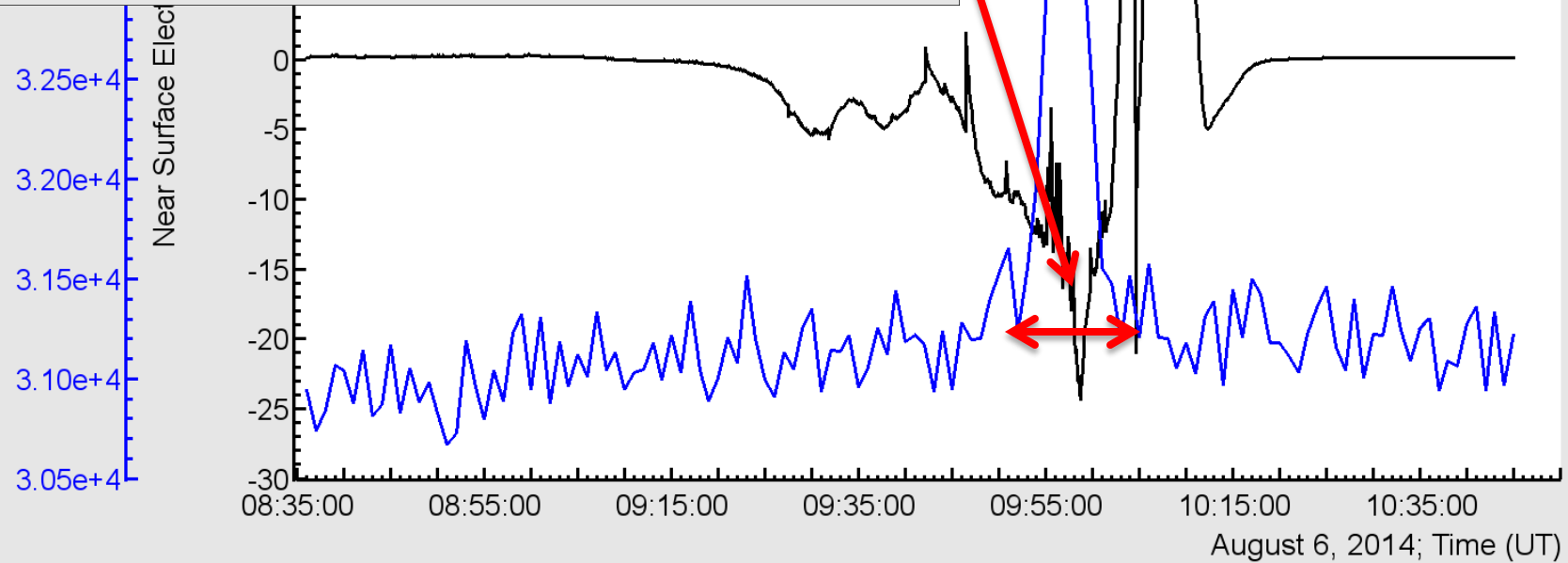
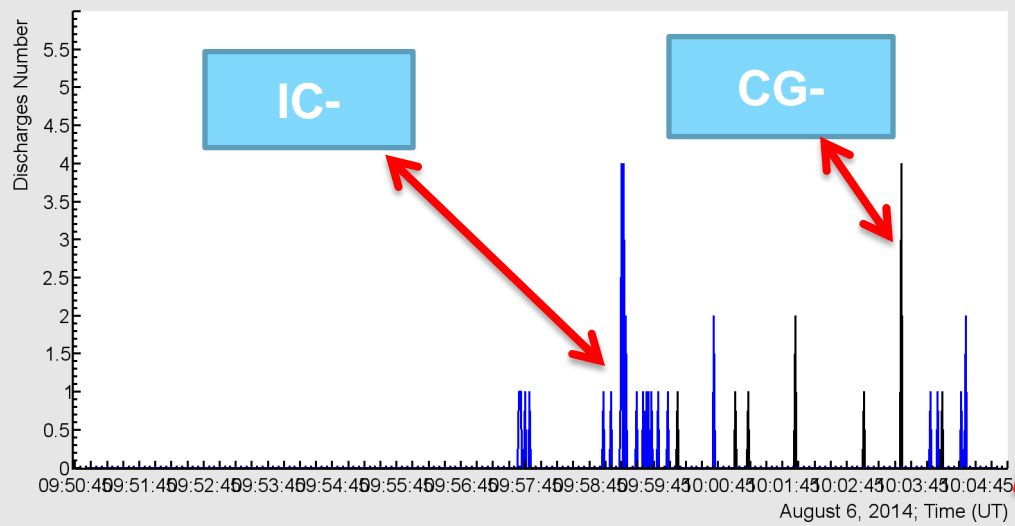


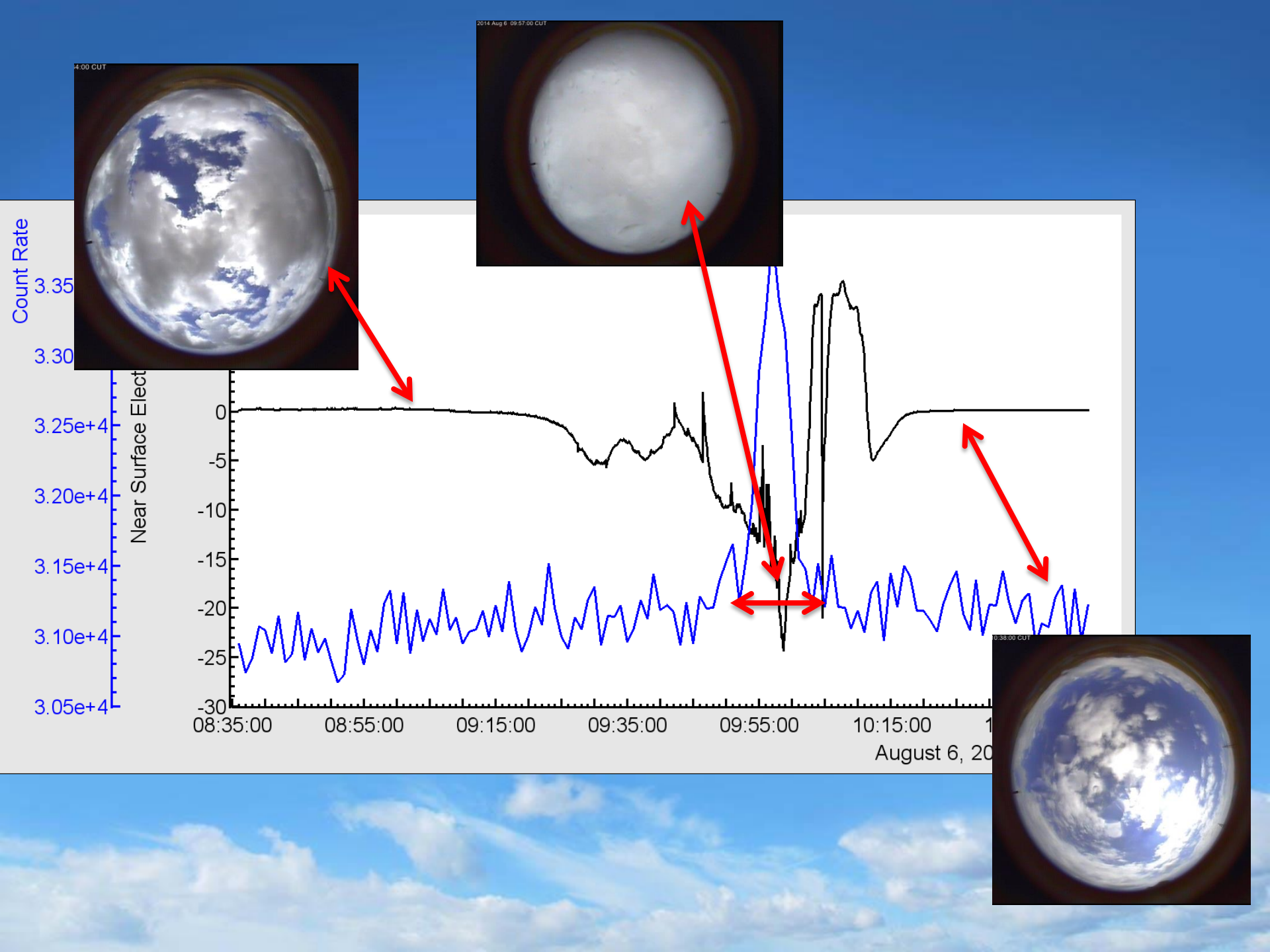


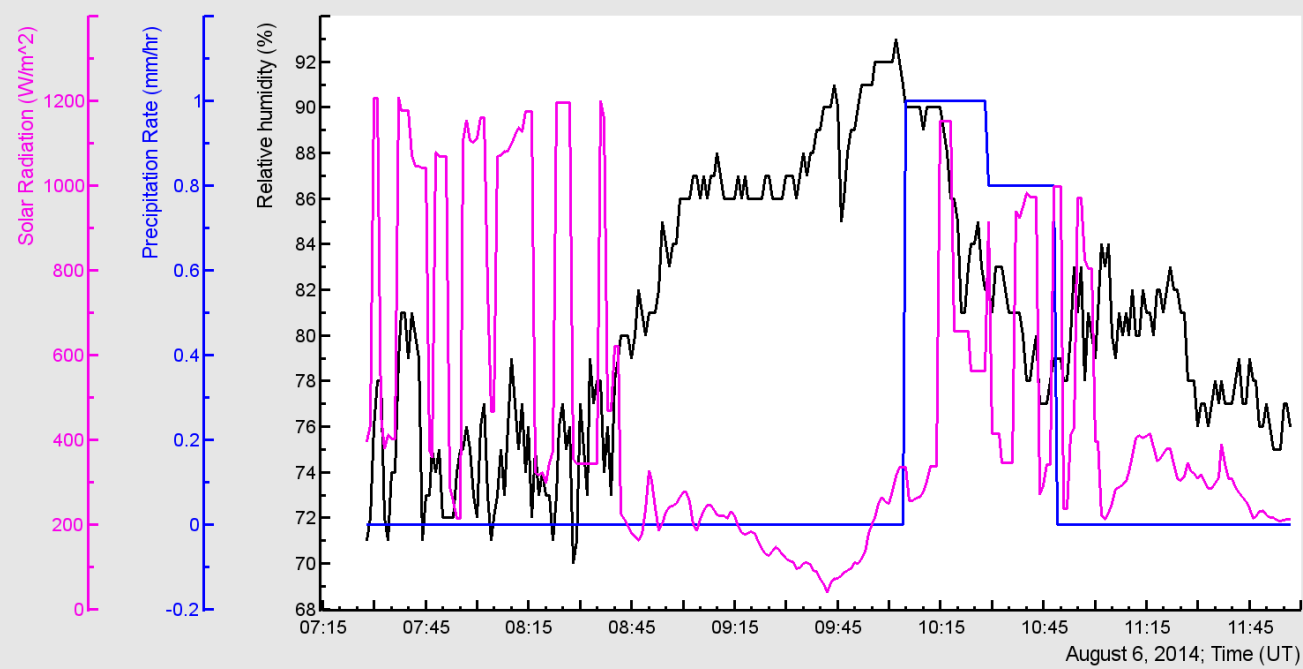
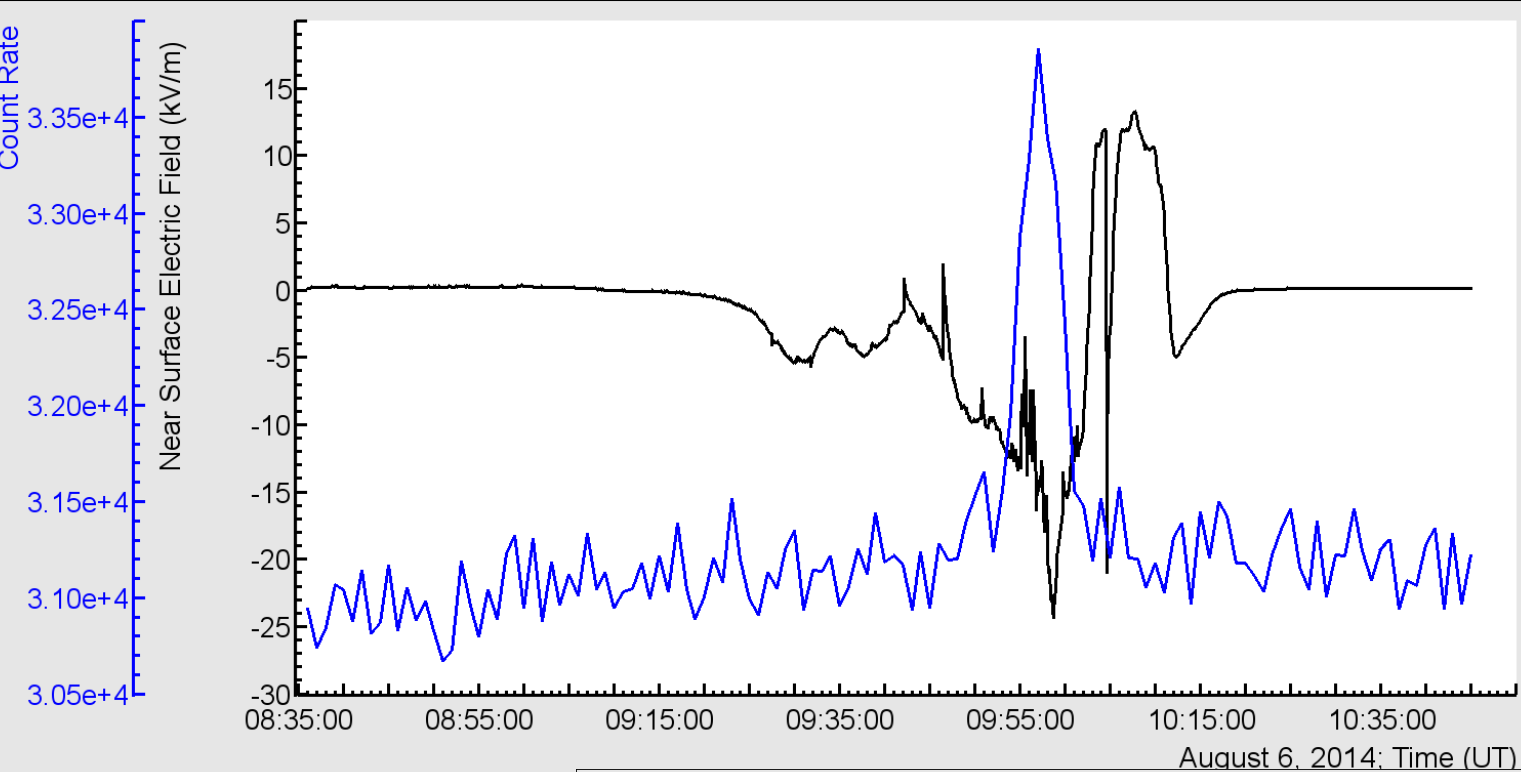
Vantage Pro2

Solar Radiation during storm

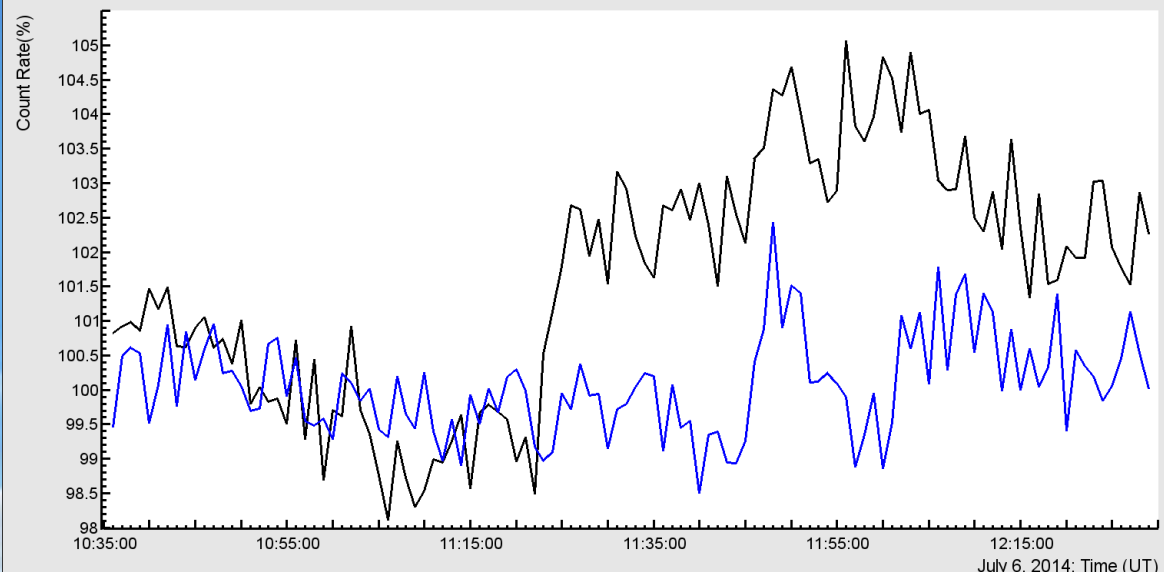
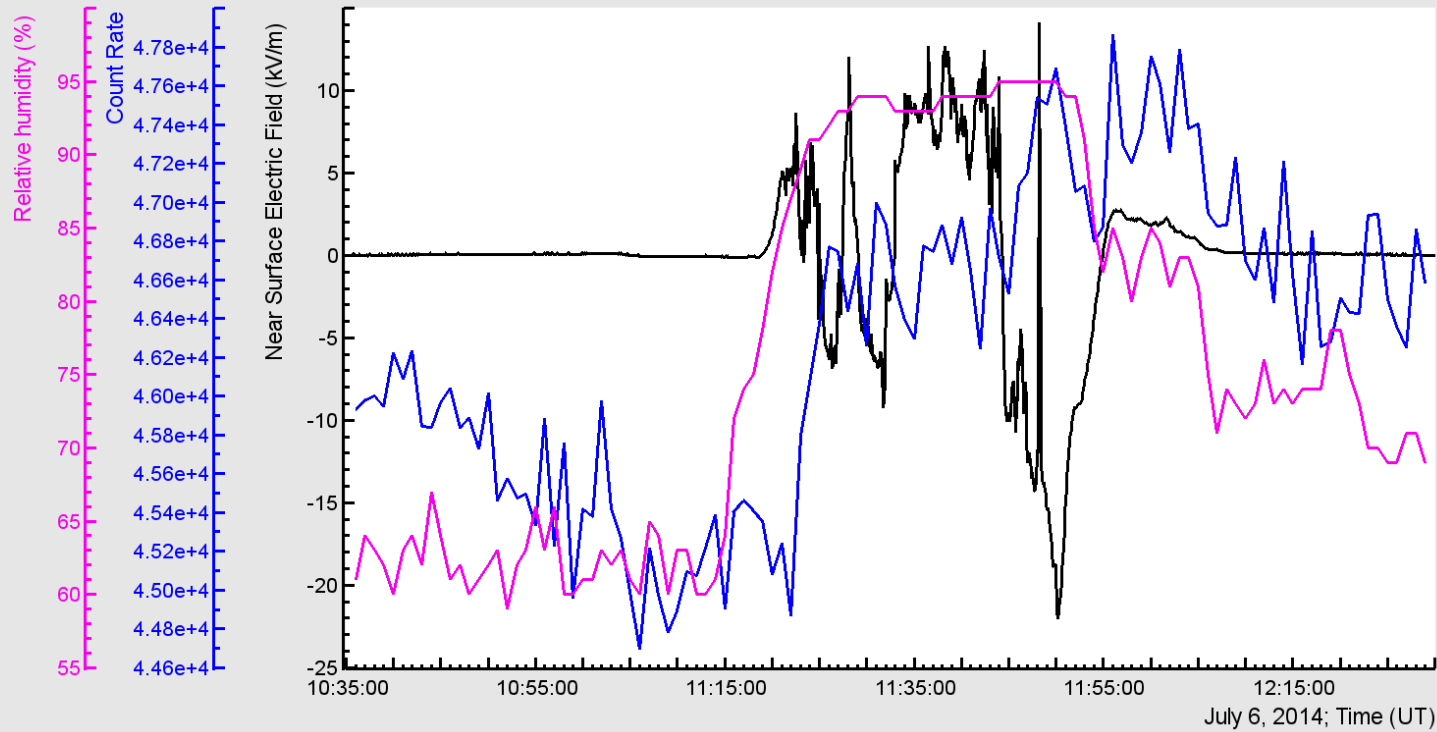




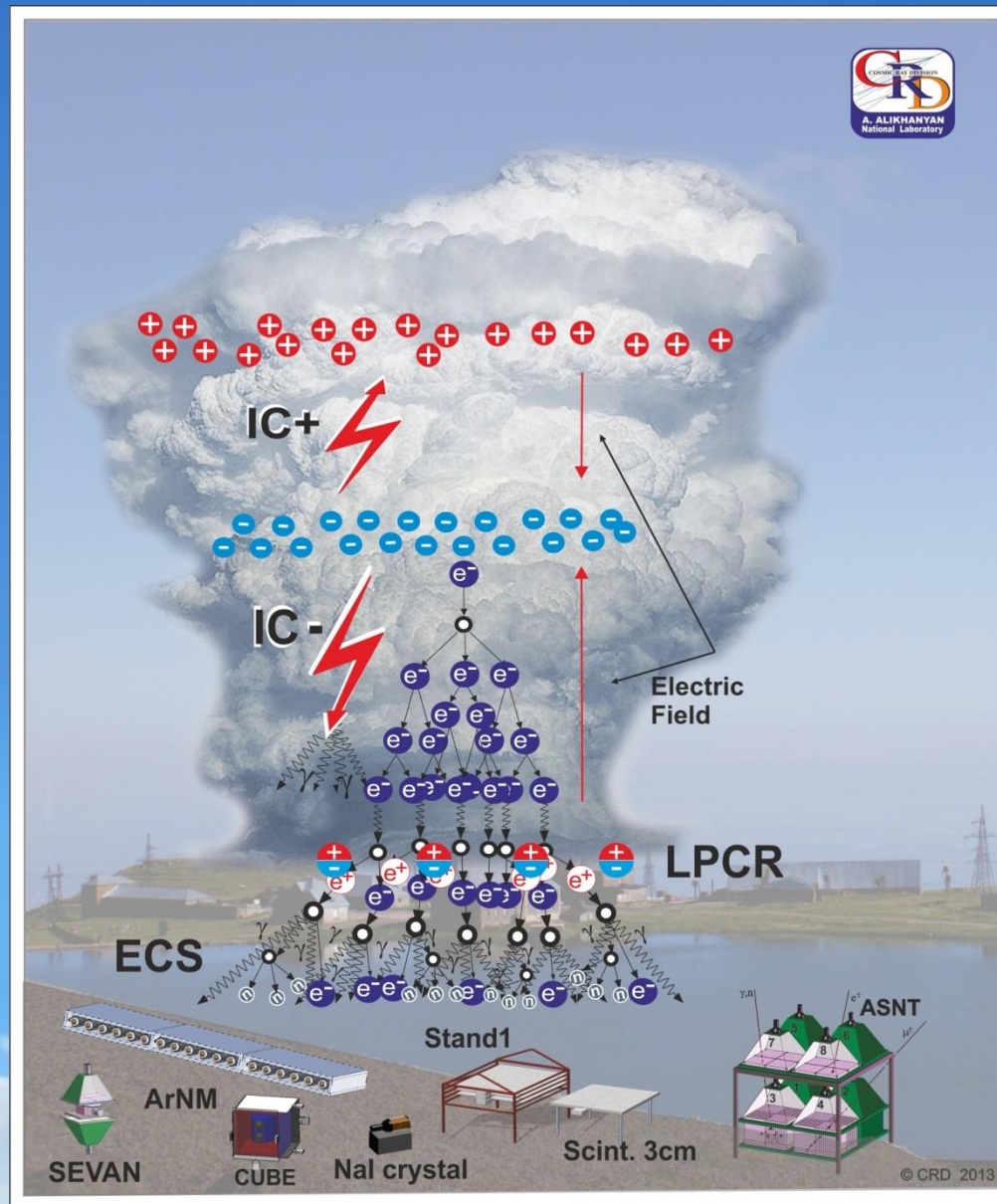




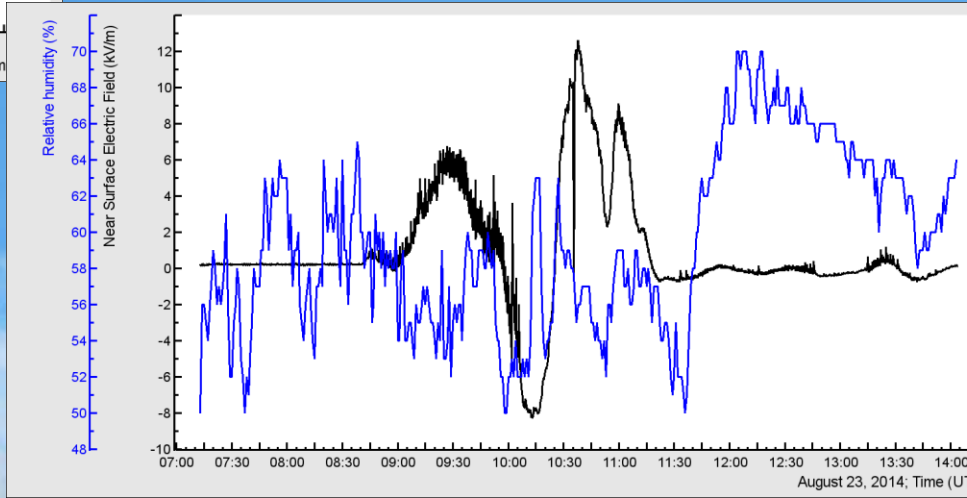
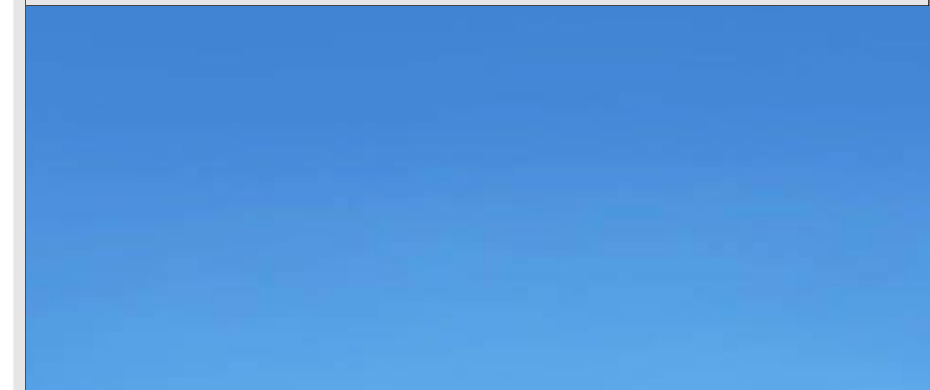
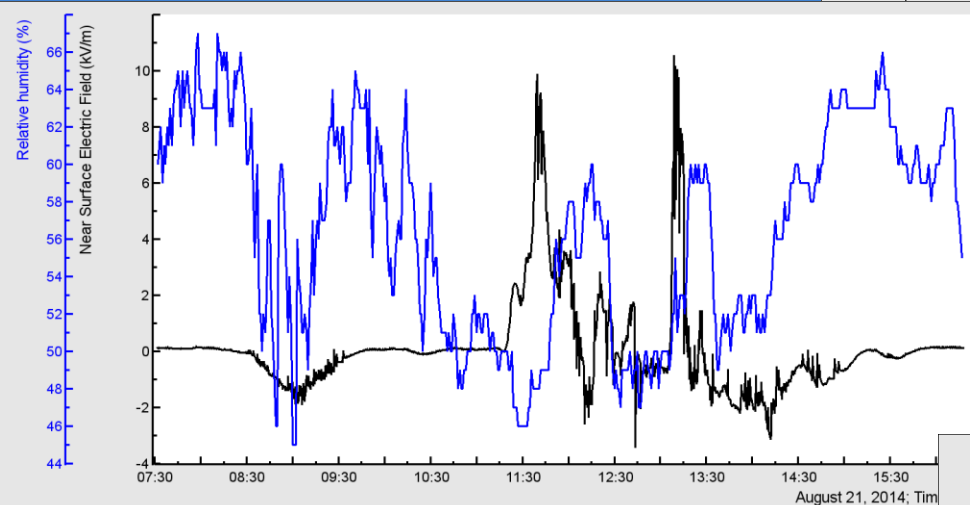
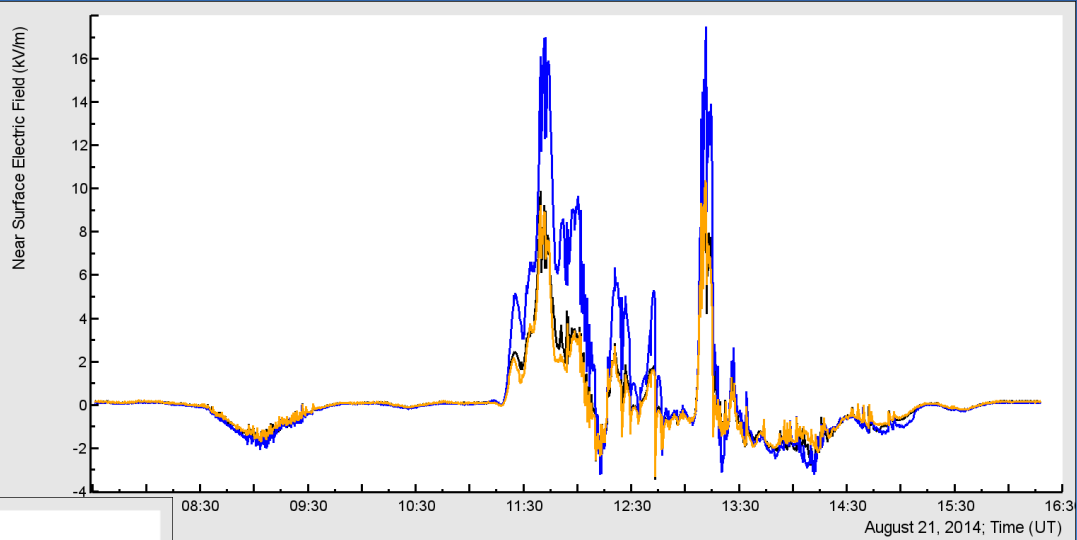
Long TGEs



Lower Positive Charge Region(LPCR)



*When humidity is low then 70%
we do not registered long or short
events*



Summary

- Cloud sizes
- Importance of relative humidity measurements
- Differences between short and long TGEs
- LPCR

Thank you