The ongoing drought severely impacted TLE activity. Yet with
the mobile Phantom HSI was deployed in an MCS stratiform
region to search for SP+CGs. A +64 kA CG near Graham, TX
resulted in a Lightning Triggered Upward Lightning event from an 80 m
wind turbine. A gigantic jet was also imaged by a SpriteCam over the OKLMA.

Though uncommon, SP+CGs can originate in the downshear anvil of a supercell, such as
the one shown here from 30 MAR 12 in the OKLMA. With about 50% positive CGs, it produced 20 sprites, as
confirmed by two SpriteCam systems in central NM. Four of
the Colorado LMA. For two hours, upon evolving into more of
a splitting supercell in Wyoming moved south into the new
region to search for SP+CGs. A +64 kA CG near Graham, TX
resulted in a Lightning Triggered Upward Lightning event from an 80 m
wind turbine. A gigantic jet was also imaged by a SpriteCam over the OKLMA.

The volume discharged through the end of the sprite averaged 125 km
~92 ms
2.74 C/km
101 km
3638 C km
104 C
6.0 km AGL
643 ms
221 ms
150 C km
45.7 km
44 kA
~5 ms
2 ms
328 ms
4/4 events

Charge density in total discharge removal volume
Volume of charge removal (SP+CG until end of discharge)
Volume of charge removal (SP+CG until end of sprite)
Area of charge removal (SP+CG until end of discharge)
Total discharge charge lowered
Charge lowered by end of sprite
CMC at sprite ignition
"Impulse" charge lowered
iCMC average for sprite parent +CGs (SP+CGs)
Zq average (range 5.4 to 6.8 km AGL)
Length of light visible in HSI images
Length of LMA sources being detected
Continuing current duration in HSI
Maximum sprite visible duration (Watec)
Blooming in HSI after SP+CG (indicates extended RS?)
SP+CG peak current
First LMA source leads SP+CG
Recoil leaders visible below cloud base

METRICS FOR 4 SP+CGs IN COLMA

Acknowledgments: This work is a component of the ongoing PhoCAL award to Duke University under the DARPA NightSail program. Additional support comes from the DoD services experiment development in various national university summer support from the National Science Foundation.

We would like to acknowledge the ongoing support of National Sci, for providing NLDN data for the Duke National Charge Moment Change Network (CMCN).