



TEXAS TECH UNIVERSITY™

# West Texas LMA

DEPLOYMENT AND OPERATIONS UPDATE

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Atmospheric Science Group*

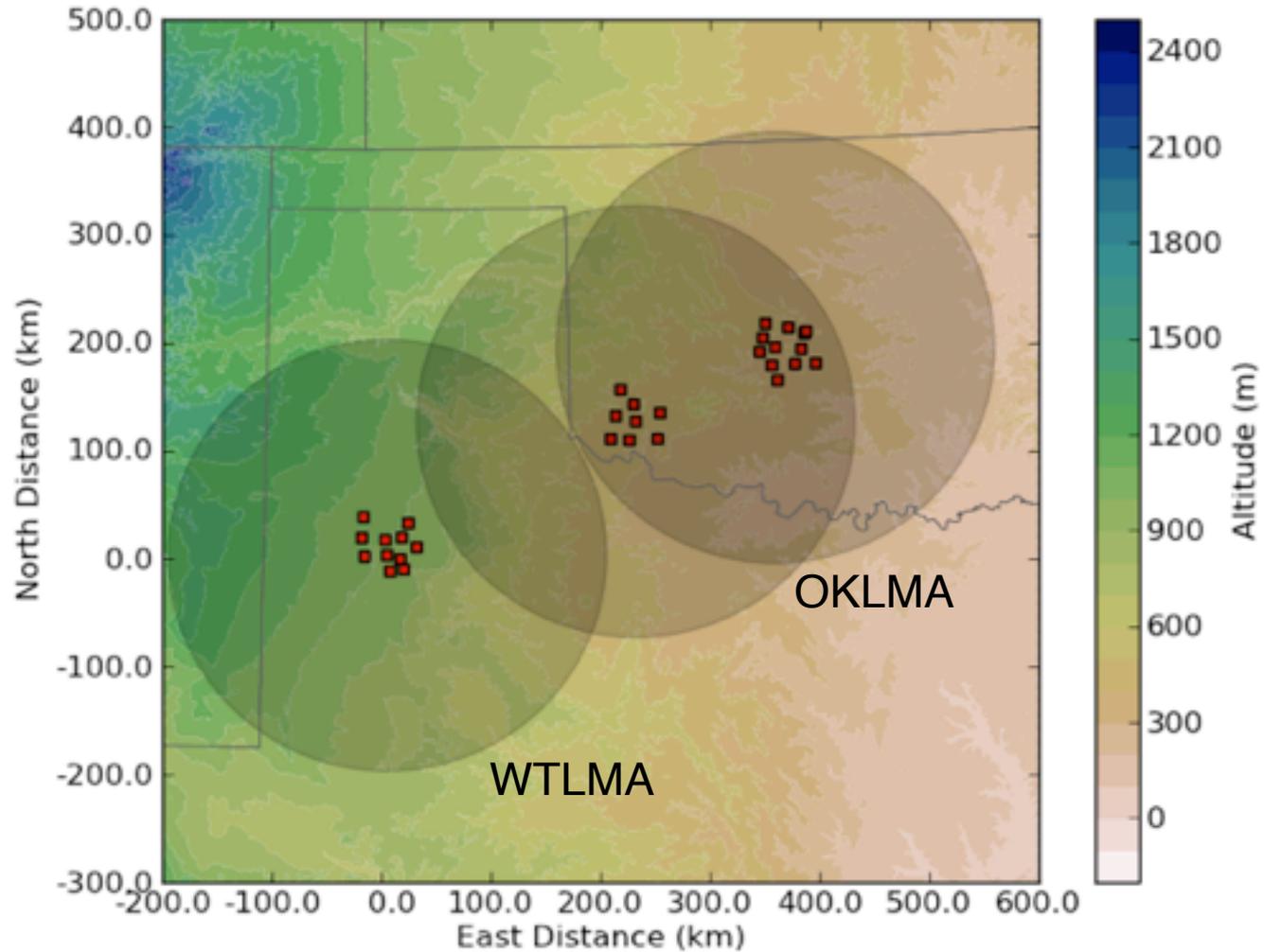
*Steve Cobb  
NOAA / NWS Forecast Office, Lubbock, Texas*

*Southern Thunder 2011, Norman, OK  
11-14 July*

*Special thanks to: TTU Wind Science & Engineering, Jerry Guynes, Jeff Livingston,  
Glenn Allen, Vanna Sullivan, Stephanie Weiss, Justin Weaver, Joe Jurecka, Natalie  
Gusack, RJ Hill*



*Projected 2D coverage, Spring 2012*

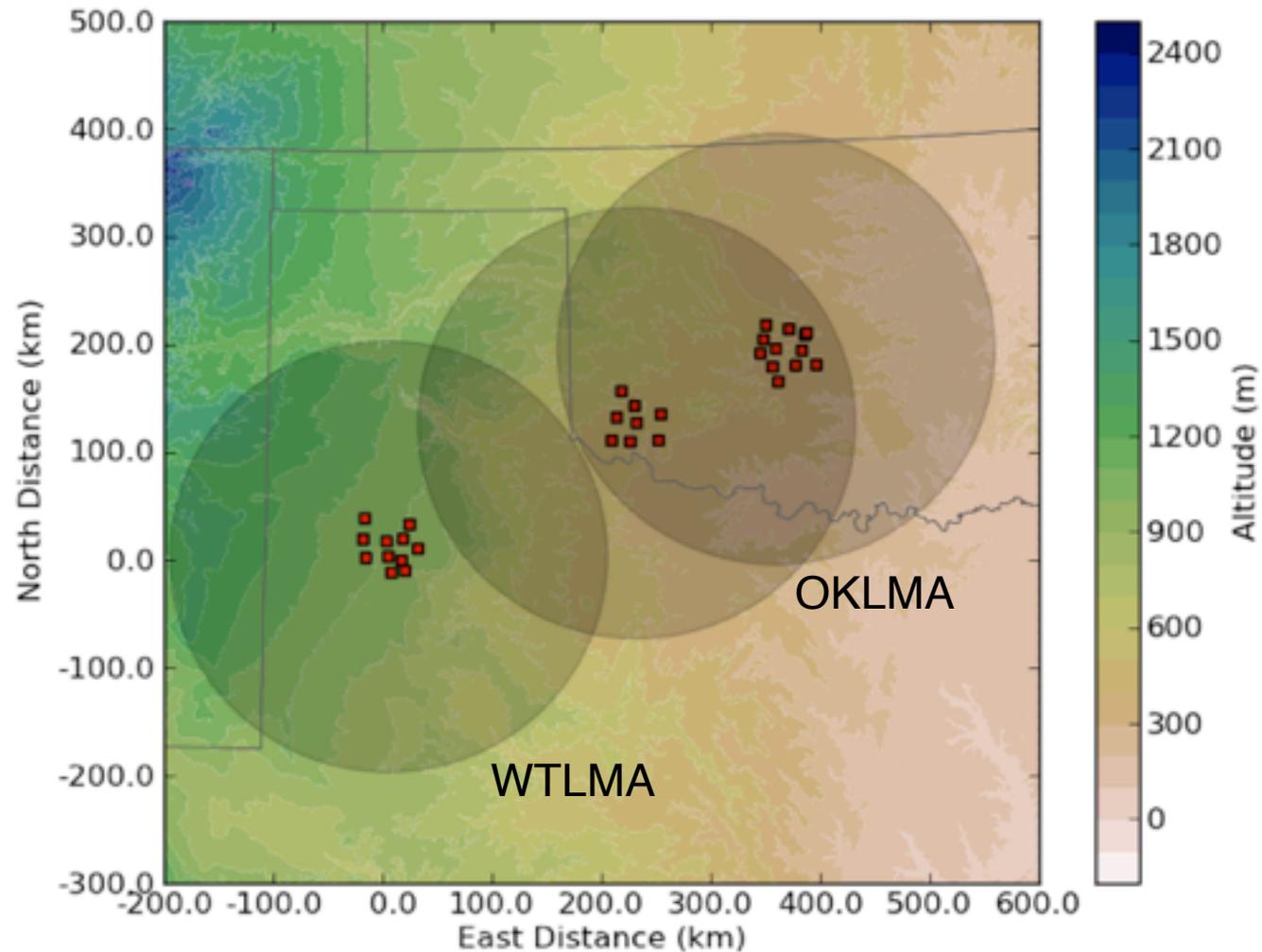


# WEST TEXAS LMA



- Unique regional coverage overlaps with OKLMA

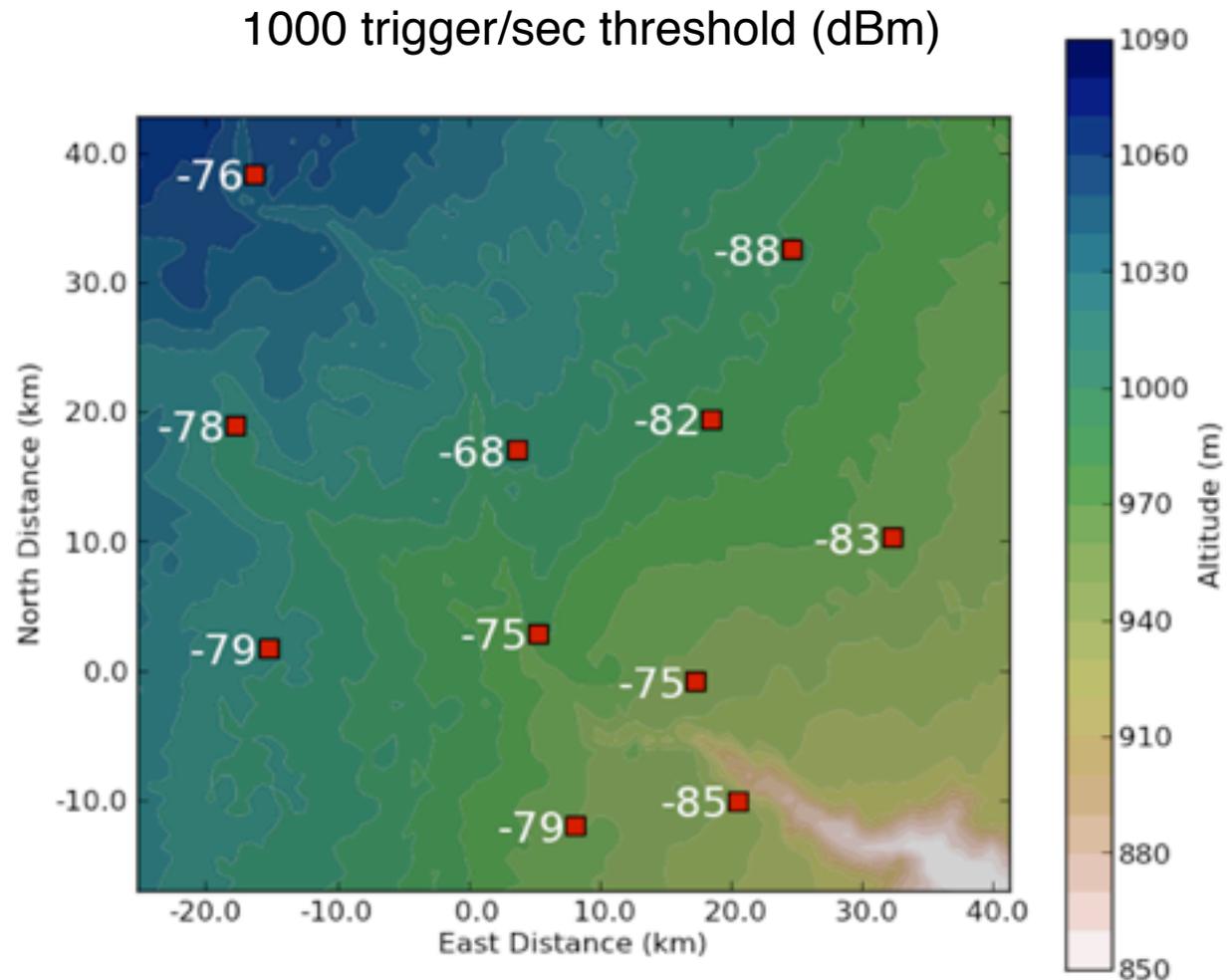
*Projected 2D coverage, Spring 2012*



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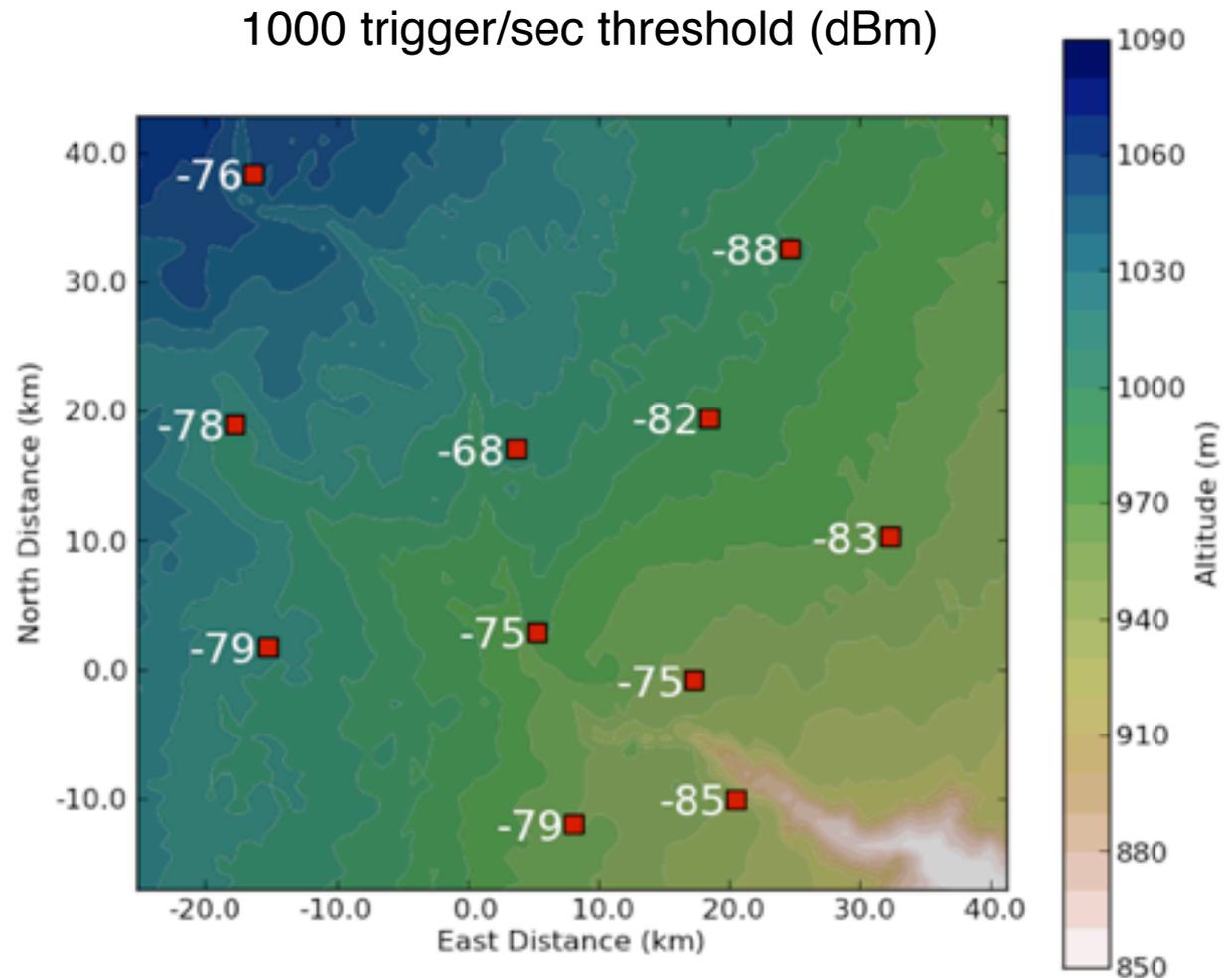
- Unique regional coverage overlaps with OKLMA
- **11** confirmed sites; good to very good noise levels



# WEST TEXAS LMA



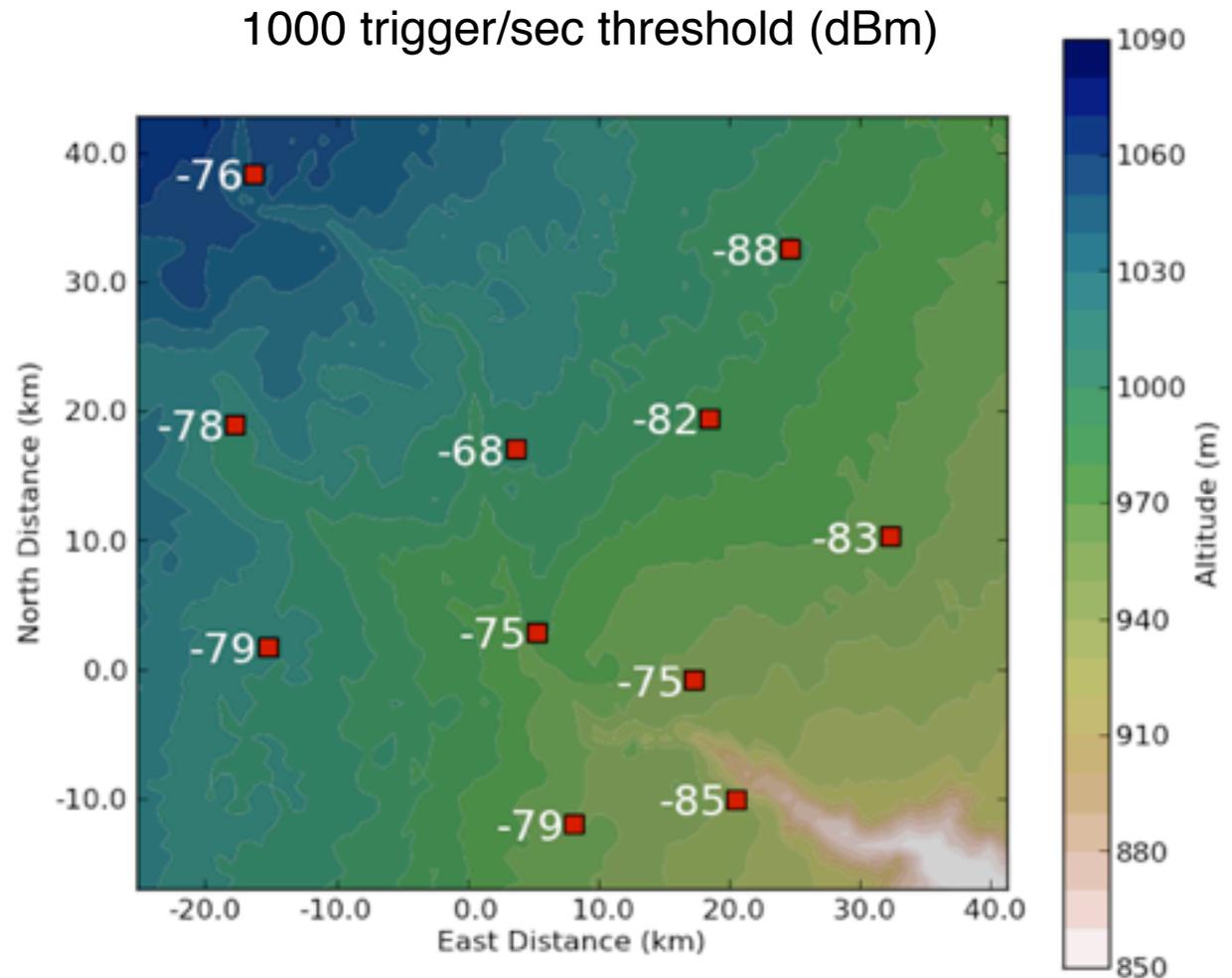
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- **11** confirmed sites; good to very good noise levels
- Installation begins next week



# WEST TEXAS LMA



- Unique regional coverage overlaps with OKLMA
- **11** confirmed sites; good to very good noise levels
- Installation begins next week
- Operational in early October





# WTLMA: HARDWARE STATUS



## *Ready to deploy*

- 11 custom-welded solar stands, guyed antenna poles, and fencing
- Solar panels, batteries
- Wireless radios, antennas

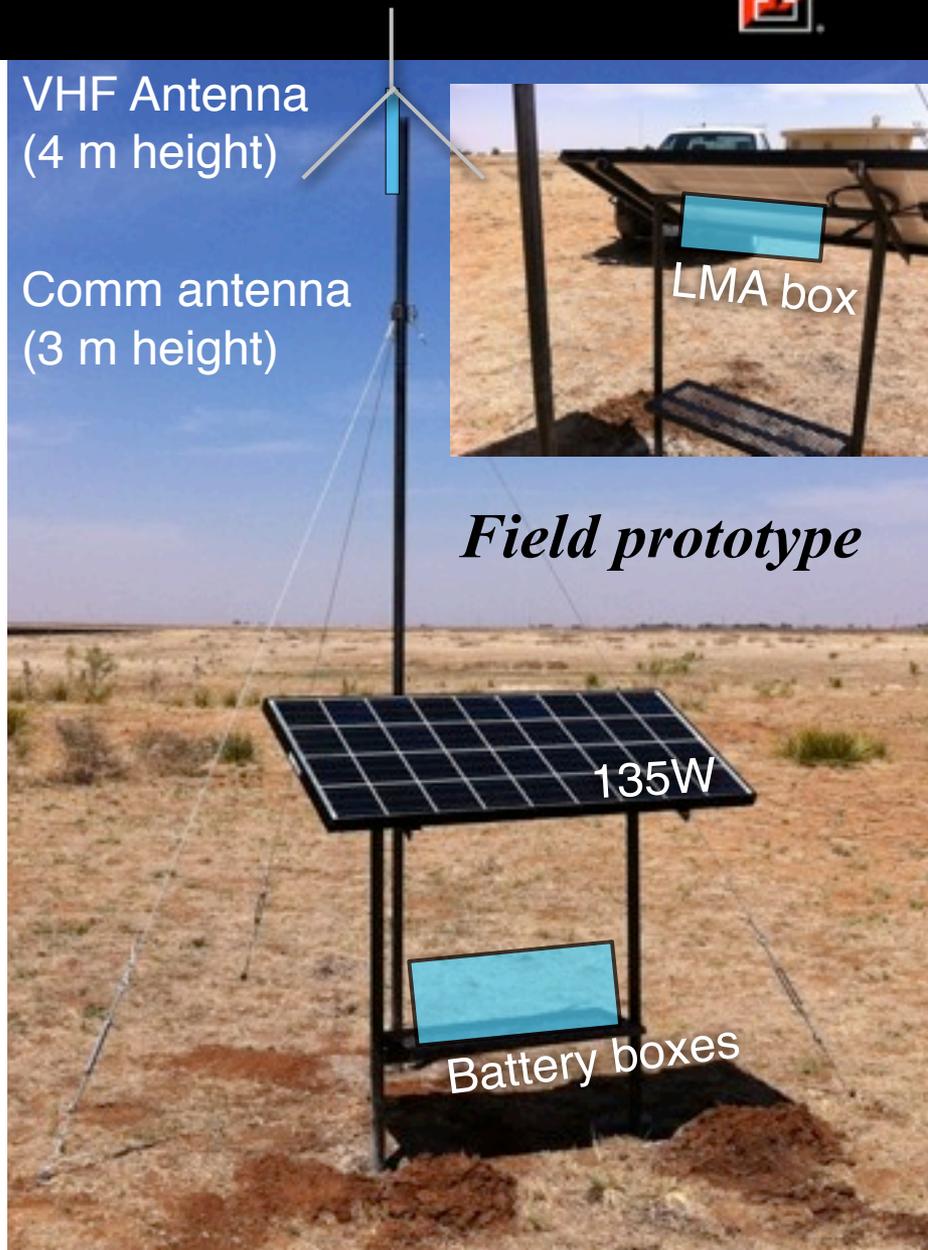
VHF Antenna  
(4 m height)

Comm antenna  
(3 m height)



LMA box

*Field prototype*



135W

Battery boxes

# COMMUNICATIONS AND DATA PROCESSING

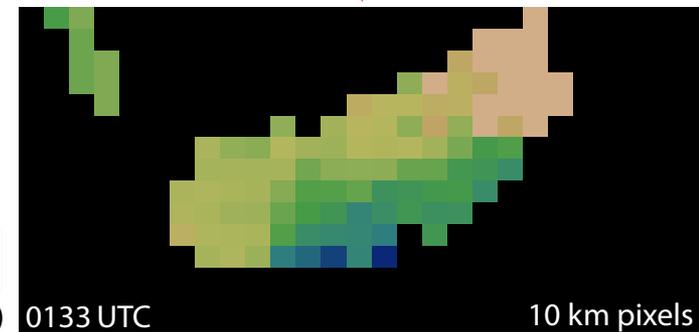
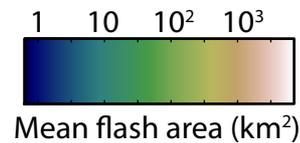


- < 1 km between field sites and schools, etc. with Internet.
  - *5.8 GHz (802.11a) directional antennas*
  
- LMA processor / RAID at TTU's 24/7 central server facility
  - *AWIPS- and web-ready product generation*
  - *Backup RAID and research processor at HPCC facility*
  
- Will use existing TTU LDM feed to NWS Lubbock.
  - *Latency and throughput already verified for real-time data*

# FORECAST OFFICE INTERACTION



- GOES-R / COMET project
  - *Training*
    - Develop new, complementary module
    - Provide detailed grounding in expected electrical behavior for different storm modes and conceptual models
  - *Product generation and operations support*
    - Flash extent density, median flash footprint
    - Other techniques / products (e.g., lightning jump)
    - AWIPS localization for new products already underway (J. Jurecka)
    - Post-event roundtable: utility of products and training







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