Flip Chart Notes

Day One

2 σ Lightning Jump Field Test
Ground rules for a fair test (issues)
Tracker (TITAN, LakTrak, SCIT)
Flash ID (XLMA, McCaul, Other)
Initiation Points
Storm reports vs. Automatic (e.g., radar hail detection)

Multi-cell storms (storm modes)
Verification
Track on LMA vs. Radar (dBZ)
LMA/Total Lightning Networks
NALMA, DCLMA, OKLMA, WTLMA, KSC, Houston, Langmuir/White Sands

Enhanced verification effort
Tornado (Storm reports + radar)
Hail (Shave)
Wind (MADIS)
Objectives
Reduced FAR verified?

Data management
Archive data (YR 1)
Forecaster in the loop (YR1? YR2?)
LMA/LDAR-II
88D (MRMS) – base data preprocessed
Environmental data (RUC, NSSL, or HRR)

Phase 1
Stress test for automated processing
2 σ implementation (Carey, Schultz, Kuhlman)
LakTrak (Kristen, Lak)
Knobs to tune (Ben, Kulhman, Lak, Dan Cecil, Chris Schultz, Larry Carey)
Determine test period (Scott R, Bill M, Chris S, Larry C, Geoffrey Stano)
Verification (contact Barb Brown – FVWG)

Project communication (Tom Filiaggi)
Standing meeting?
SMEs by topic
Define phases, test prep, conduct test

Day Two

Training
SPoRT 15 min module
IC information vs. CG
Lightning jump
NOAA LMS
Brian Motta help
Feedback from forecasters
Good technical content
Three piece GOES-R module

What do we do with it
45 minute longer module broken into 15 min chunks

1) Classic use – physical meaning
2) Lightning safety – extensive horizontal extent
3) Where it is misleading or does not provide operational use

Not a black box
Make best use of time to get forecaster buy-in

Training to understand system performance (e.g., LMA DE vs. range)
TTU comet project
Science – operations + applications + filling the gap
Conceptual models, storm modes, where, when, how much lightning
Bridge radar understanding to add total lightning

Cloud physics
As an aviation tool
Tropical weather
Algorithms and applications
Concept of trends e.g., growth/decay
TTU+SPoRT, evolve coordination
How to validate in forecast decision making using other data – NLDN, radar
Decision support

CICS-Sterling WFO
Develop WES cases
Get feedback from forecasters
Train on the operational utility

Blended/fused applications with total lightning
Be aware of end user requirements, watch for data overload
Fire weather prof, aviation hazard, severe weather

Forecaster will get lots more data

Need for data fusion, with tools that are easy to use
What data are important for forecast or warning, focus on issue at hand
NWS serves as a filter of information
Distill information for customers

Automation
Degree of processed data (open simple standard format)
Full data – simple products
Increased use of GIS tools
Must be able to drill down to base data
Environment – CI – LI
CI – first lightning, 35 dBZ, mixing ratio threshold with updraft flux

Aviation
CG lightning stop
International sigmets GLM+ABI convective turbulence
Need for lightning probability 1-3 hours for aviation
Next-Gen data integration
LMA-3D convective development GR analyst to probe storm structure