SOUTHERN THUNDER 2011 AGENDA

11-14 July 2011

Monday

1:00 pm Welcome and orientation

Session 1: Total Lightning Mapping System Status Reports

1:20 pm Bill Rison
Socorro, NM; White Sands Missile Range; Dugway Proving Ground; and planned Colorado network for DC3

1:35 pm Rich Blakeslee
Northern Alabama, DC region, and Camp Blanding LMA Networks

1:45 pm Don MacGorman
Oklahoma LMA

1:50 pm Eric Bruning
West Texas LMA

1:55 pm Nikki Hembury
Overview of the Current Status and Future Plans for the Vaisala VHF Total Lightning Mapping Networks around the World

2:00 pm Steve Goodman
High Impact Weather Forecasts and Warnings with the GOES-R Geostationary Lightning Mapper (GLM)

Break 2:15 – 2:45 pm

Session 2: Use of Specific Networks

2:45 pm Bill Roeder
Status and Plans for the Four Dimensional Lightning Surveillance System (KSC & Cape Canaveral)

3:00 pm Bill Rison, Paul Krehbiel, Ron Thomas, and Harold Edens
Lightning Mapping Array Observations: An Update

3:15 pm Nikki Hembury and Ron Holle
The Latest Technological Advancements to the Vaisala VHF Total Lightning Product Offering and Implementation to Real-time Networks such as NLDN®

3:30 pm Scott Startz
Lightning Mapping Array for White Sands Missile Range Applications

Break 3:45 – 4:05 pm

4:05 pm Stan Heckman
LF Channel Mapping

4:20 pm Bill Beasley, Stephanie Weiss, and Stan Heckman
Comparison of WTLN and OK-LMA Data

4:35 pm Larry Carey, Chris Schultz, Walt Petersen, Scott Rudloski, Monte Bateman, Dan Cecil, Rich Blakeslee, and Steve Goodman
Inter-comparison of Lightning Trends from Ground-based Networks during Severe Weather: Applications toward GLM

4:50 pm Nick Demetriades, Ron Holle, and Nikki Hembury
Vaisala TLS200 VHF Total Lightning Mapping for Safety and Nowcasting Applications

5:05 pm Organize break out discussion groups

5:30 pm End of Session 2

Tuesday, July 12

Session 3: Operational Technology and Experience

9:00 am Valliappa Lakshmanan, Madison Burnett, and Travis Smith
Hysteresis and Multiple Hypotheses Tracking: Ways to Avoid Hard Decisions in Storm Identification and Tracking

9:15 am Harold Edens, Bill Rison, Paul Krehbiel, and Ron Thomas
LiveLMA: An Interactive Real-time Display for LMA Data

9:30 am Chris Schultz, Walt Petersen, and Larry Carey
Overview of the Total Lightning Jump Algorithm: Past, Present, and Future Work

9:45 am Geoffrey Stano, Brian Carcione, and Jason Burks
New Total Lightning Visualizations

Break 10:00 – 10:30 am

10:30 am Kristin Kuhlman, Geoffrey Stano, and Chris Siewert
Use and Evaluation of Total Lightning Data with the GOES-R Proving Ground and Experimental Warning Program

10:45 am Chris Darden, Jason Burks, Brian Carcione, and Geoffrey Stano
Total Lightning: Operational Lessons Learned and a Look to the Future

11:00 am David Sharp, Peter Blottman, Matthew Volkmer, and Matthew Mahalik
Using Total Lightning Information in Support of Warning Operations within Blocked Radar Sectors and during Significant Radar Outages

11:15 am Geoffrey Stano and Brian Carcione
Cold Season Usage of Total Lightning Observations

Lunch 11:30 – 1:15 pm

Session 4: Modeling and Lightning Data Assimilation

1:15 pm Mark DeMaria, John Knaff, Debra Molenar, Robert DeMaria, Michael Brennan, and Nick Demetriades
The Impact of Lightning Density Input on Tropical Cyclone Rapid Intensity Change Forecasts

1:30 pm Alexandre Fierro, Ted Mansell, Conrad Ziegler, and Don MacGorman
Cloud-scale Data Assimilation Technique for Total Lightning within the WRF-ARW Model for a Tropical Cyclone and a Severe Weather Outbreak in the Great Plains

1:45 pm Henry Fuelberg, Michael Navon, Razman Stefanescu, and Mac Marchand
Assimilating Lightning Data into WRF Using a Combination of 1-D and 4-D VAR

2:00 pm Ted Mansell, Conrad Ziegler, Blake Edward, Don MacGorman
Modeling and Assimilating Total Lightning Production in Storms

Break 2:15 – 2:45 pm

2:45 pm Breakout Discussion Groups

5:00 pm Reconvene for group questions and discussion

5:30 pm End of Session

Wednesday, July 13

Session 5: Modeling Convection and Lightning Forecasts

9:00 am Alexandre Fierro
Lightning Observations and Modeling in Hurricane Rita

9:15 am Phillip Bothwell
Multi-Model Lightning Prediction

9:30 am Bill McCaul, Jonathan Case, Scott Dembek, Fanyon Kong, Steve Goodman, and Steve Weiss
Implementation of the WRF Lightning Forecast Algorithm in the CAPS Storm-scale Ensemble Forecast System

9:45 am Amanda Hopkins, Henry Fuelberg, Ken Pickering, and Steven Peckham
Simulating Lightning Flash Rates on the Regional Scale Using WRF-Chem

Break 10:00 – 10:30 am

Session 6: Observations of Lightning – Storm Relationships

10:30 am Don MacGorman, Kristin Kuhlman, Stephanie Weiss, Jeff Makowski, and Matt Elliott
Characteristics of Total Lightning Relative to Severe Storm Evolution in the Central Plains

10:45 am Scott Rudlosky and Henry Fuelberg
Relationships between Lightning and Radar Parameters in the Mid-Atlantic Region

11:00 am DAI Jianhua and SHAO Chen
Case Study Using Total Lightning Data for Some Severe Thunderstorms during the 2010 Shanghai Expo Period

11:15 am Patrick Hyland, William Beasley, and Stephanie Weiss
The Time between First Radar Echoes and First VHF Lightning Radiation Source Locations as an Indicator of Eventual Storm Intensity

Lunch 11:30 am – 1:15 pm

1:15 pm Joint coordinating meeting before breakout groups

1:30 pm Breakout group discussion

Break 3:00 – 3:30 pm

3:30 pm 10-min Summaries of each group's discussion

4:00 pm Breakout Discussion Groups (can change groups)

5:30 pm Stop Discussion Groups

6:30 pm Banquet at Sam Noble Oklahoma Natural History Museum

Thursday, July 14

9:00 am Presentations by each breakout group (30 min for each group's presentation and discussion)

Break 10:30 – 11:00 am

11:00 am Summary: Action Items, Intermediate Meetings, and 2013 Meeting

Noon End of Workshop