



AUTOMATED VOLUME SCAN EVALUATION AND TERMINATION (AVSET)

TAC Briefing
AVSET Field Test Update
03/09/2011

Joe N Chrisman
ROC/ENG
joe.n.chrisman@noaa.gov



Briefing Purpose

- Provide update concerning the Automated Volume Scan Evaluation and Termination (AVSET) Field Test



Background

- NWS OSIP Gate 3 Completed Dec 2009
 - AVSET released back to SREC
- Test ECP for Field Test
 - Field Test Originally Scheduled for Jul 2010 through Jan 2011
 - New Schedule Dec 2010 through May 2011



AVSET Field Test

- Field Test Objectives
 - Verify AVSET supports forecast and warning operations;
 - Verify AVSET does not adversely affect the operation of the WSR-88D during active weather periods;
 - Verify AVSET-produced volume scans with varying completion durations do not adversely impact forecast and warning operations;
 - Verify AVSET-produced volume scans with varying completion durations do not adversely impact user data processing and display systems.



AVSET Field Test Participants

- Ten NWS Offices/Radars
 - NWS Southern Region:
 - Norman, OK (KTLX)
 - Melbourne, FL (KMLB)
 - NWS Central Region:
 - Goodland, KS (KGLD)
 - Indianapolis, IN (KIND)
 - Pueblo, CO (KPUX)
 - St Louis, MO (KLSX)



AVSET Field Test Participants

- NWS Offices/Radars (cont)
 - NWS Eastern Region:
 - Sterling, VA (KLWX)
 - State College, PA (KCCX)
 - NWS Western Region:
 - Glasgow, MT (KGGW)
 - Tucson, AZ (KEMX)



AVSET Field Test Participants

- Three AFWA OWSs
 - 25th OWS, Davis-Monthan AFB, AZ (Associated to KEMX and KGGW)
 - 15th OWS, Scott AFB, IL (Associated to KLWX, KCCX and KIND)
 - 26th OWS, Barksdale AFB, LA (Associated to KTLX and KMLB)
- One FAA ARTCC
 - Indianapolis ARTCC, Indianapolis, IN (Associated to KIND)



AVSET Field Test Operations

- Winter weather has limited the operational usage of AVSET
 - KIND, KGLD, KEMX, KGGW, KCCX and limited usage
 - KLSX and KPUX and occasional usage
 - KLWX, KTLX and KMLB execute AVSET routinely



General Comments - KLSX

- Dec 31, 2010 – “We were operating in VCP12 and any increased frequency of VCPs was not clearly noticeable by them (warning forecasters). Both had neither positive nor negative things to say.”
- “I took over for the last hour or so as the warning forecaster. I was specifically looking for quicker VCP updates, and did note that a VCP completion was taking roughly 3.5 minutes.”

Fred Glass (KLSX Radar Focal Point)



Comments from KMLB Log

- Feb 7, 2011 – SVR TSTMS: 3-4 minute updates Excellent!
- Feb 10, 2011 – Showers: 3 minutes scans Helping.....
- Feb 11, 2011 – In VCP 11: AVSET ON: VCP every 3-4 minutes.



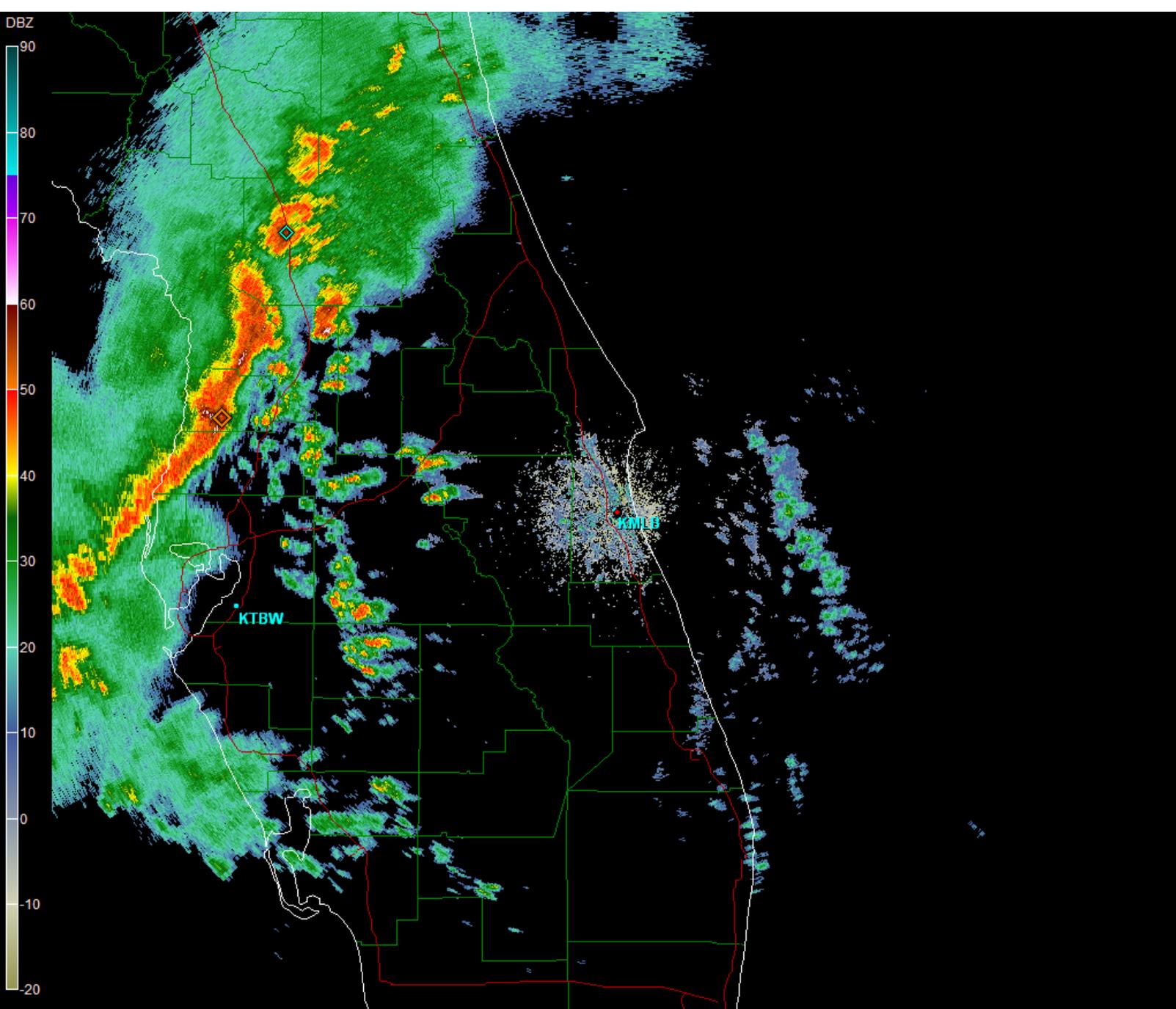
KMLB Jan 25, 2011

Summary

(Dave Sharp, SOO)



- “Through the use of the KTBW radar and the AVSET-enhanced KMLB radar, we were able to warn for Lake County with around 50-minutes of lead time.”
- “We issued a SVR, then upgraded to a TOR during that phase of the event.”
- “The towns of Groveland and Mascotte (south Lake County) received appreciable damage from what was determined to be a 70 mph punch of wind that plowed through there.”



Site: KMLB
VST: 01/25/2011 21:32:14 Z
Prod: 01/25/2011 21:32:12 Z
VCP: 212 SMV: ---
Tilt: 0.467°

Select Product:

- | | | |
|-------------------------------------|----------------------------|---------------------------|
| <input checked="" type="radio"/> BB | <input type="radio"/> VIL | <input type="radio"/> ZDR |
| <input type="radio"/> BV | <input type="radio"/> VILD | <input type="radio"/> RHO |
| <input type="radio"/> SRV | <input type="radio"/> POSH | <input type="radio"/> PHI |
| <input type="radio"/> SW | <input type="radio"/> MEHS | <input type="radio"/> KDP |
| <input type="radio"/> ET | <input type="radio"/> NROI | <input type="radio"/> HCA |

Select Tilt:

- | | | | |
|------|------|------|------|
| 0.5° | 0.9° | 1.4° | 1.8° |
| 2.4° | 3.1° | 4.0° | 5.1° |
| 6.4° | | | |

Warnings:

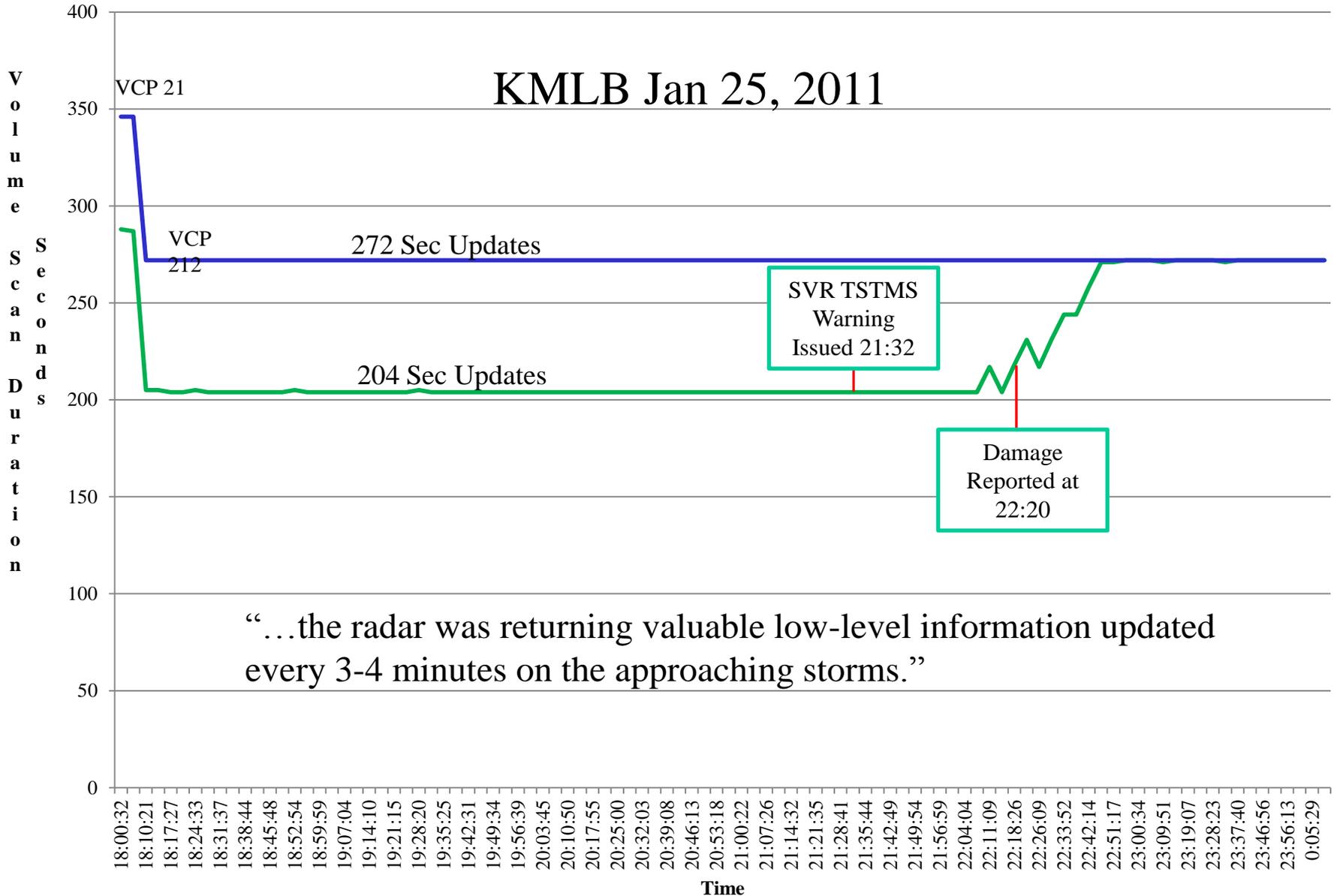
- | |
|---|
| <input type="checkbox"/> Flash Flood |
| <input checked="" type="checkbox"/> Severe Thunderstorm |
| <input checked="" type="checkbox"/> Tornado |

Product Details:

Max: 65.5 dbz
Az: 302.3°
Ran: 82.7 nm

KMLB SVR TSTMS Event

— AVSET VCP Duration — Standard VCP Duration





KMLB Comments

- “In short, the AVSET seemed to work well functionally, with no noted issues (and for many successive hours in VCP212).”
- “Operationally, it (AVSET) offered definite warning decision-making advantage for distant convection moving toward our CWA that eventually impacted Lake County (which is, again, at the west and northwest reaches of our CWA).”

Dave Sharp (KMLB SOO)



Summary

- AVSET is functioning as designed
- Limited usage so far; but initial comments very positive
- Will request SREC to Approve AVSET for Operational Use in Build 13
 - Pending Successful Results from the AVSET Field Test