

OT&E ATRB “Wrap-Up”
For the
ASOS CL31 Ceilometer
Replacement, V2.79X ACU
Software and V2.0 EPROMS

Presented to the
ASOS Test Review Board
(ATRB)

NWS/OPS24

September 29, 2009

OUTLINE

- OT&E Summary
- OT&E Recommendations
- OT&E Lessons Learned

OT&E Summary

- OT&E Started: March 9, 2009
- Phase 1 Dual Installation 17 sites (3/12/09-5/4/09) CT-12K as primary CL31 as test
- Phase 2 Dual Installation 17 Sites CL31 as primary CT-12K as test (5/18/09-6/5/09)
- Phase 3 CL31 alone 4 sites (6/15/09-6/20/09) 17 Sites CL31 alone
- Note: MCE (Nov 08-Mar 09) – 8 sites

OT&E Summary

- Phase 3 (addition) – V2.79X with IFW V4.54 – mid-July 2009 – August 20, 2009 (CL31 as stand alone operational sensor)
 - IFW firmware V4.54 corrects latent defect with IFW heater where sensor doesn't send "Failed" flag or System Log error message to ASOS
 - V2.79X corrects TTR 210: V2.79V Did Not Generate "F" Flag when IFW Sensors Thermistor Failed
- No issues found with V2.79X or IFW V4.54

OT&E Summary

- August 20 TRG and ATRB voted to recommend national deployment of CL31 V2.79X, IFW V4.54, and V2.0 EPROMS
 - Alaska region – only region or TRB member to vote not to recommend CL31 deployment
- Approval process ASOS:
 - TRG/ATRБ recommend deployment
 - The TRG/ATRБ notified chair ACCB of recommendation
 - OST submits a deployment RC (CL31 and IFW V4.54) to ACCB
 - Chair ACCB forwards CL31 recommendation (not IFW V4.54) for deployment to APMC for approval
- No critical TTR's, Two Recommendations:

OT&E Recommendations

- Deploy slowly starting in Northern US
- SIO card error issues
 - NWS (NRC, OST31, OPS12, and OPS23) will investigate possibility of a standard ASOS port assignment or other solution to SIO card errors that have existed on ASOS for many operational software loads
- Bird Abatement Plan for “False Cloud” reports at OKC (OST, OPS22, NWS Southern Region, OKC)
 - OST has developed a draft action plan for this activity

OT&E Recommendations

- Bird Abatement Plan for “False Cloud” reports at OKC (continued)
 - Wildlife camera has been installed at OKC for WFO Norman staff to document bird activity on or around the CL31
 - WFO Norman installed the “whirly bird” abatement supplied by the Navy to see if it helps deter birds from the CL31

OT&E Lessons Learned

- Follow Mod Notes closely. Make sure ET's know that Mod Notes are written for deployment, and that some modifications or exceptions may exist for the Mod Notes during OT&E
- Dual Installation instructions (CT-12K and CL31) should be sent out earlier in the OT&E process with details about how they are different than the Mod Notes for deployment.

OT&E Lessons Learned

- Most problems occurred with dual installation (CT-12K and CL31)
- Remember – To jumper power to right side of card UART
- Force Cold Boot (download) to DCP PULL JUMPER at DCP to assure clean start and clean memory from DCP when installing any new firmware version.

OT&E Lessons Learned

- Send out Mod Note comments to OT&E sites as received instead of waiting until after OT&E is complete
- SIO card errors (GEG, GDP) – look at all possible causes for problems including other ASOS sensors
 - Follow up Action Plan
- Bird issue “false clouds” OKC
 - Follow up Action Plan written by OST

OT&E Lessons Learned

- FO Modems seemed to be an issue at some OT&E sites
- Bolts to mount CL31 need to be longer when shimming the sensor for tilting