

AWIPS Build 16.4.1

Informational Overview

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Welcome to the AWIPS Build 16.4.1 Informational Overview. I'm Stas Speransky from WDTD, and I will be introducing you to some of the significant changes in 16.4.1.



• **Course Completion Info**

- *Tabs - 4 Tabs (Including Introduction)*
- Last Modified: Dec 14, 2016 at 01:23 PM

PROPERTIES

Show interaction in menu as: [Single item](#)

Allow user to leave interaction: [At any time](#)

Prev/Next player buttons go to: [Slide in presentation](#)



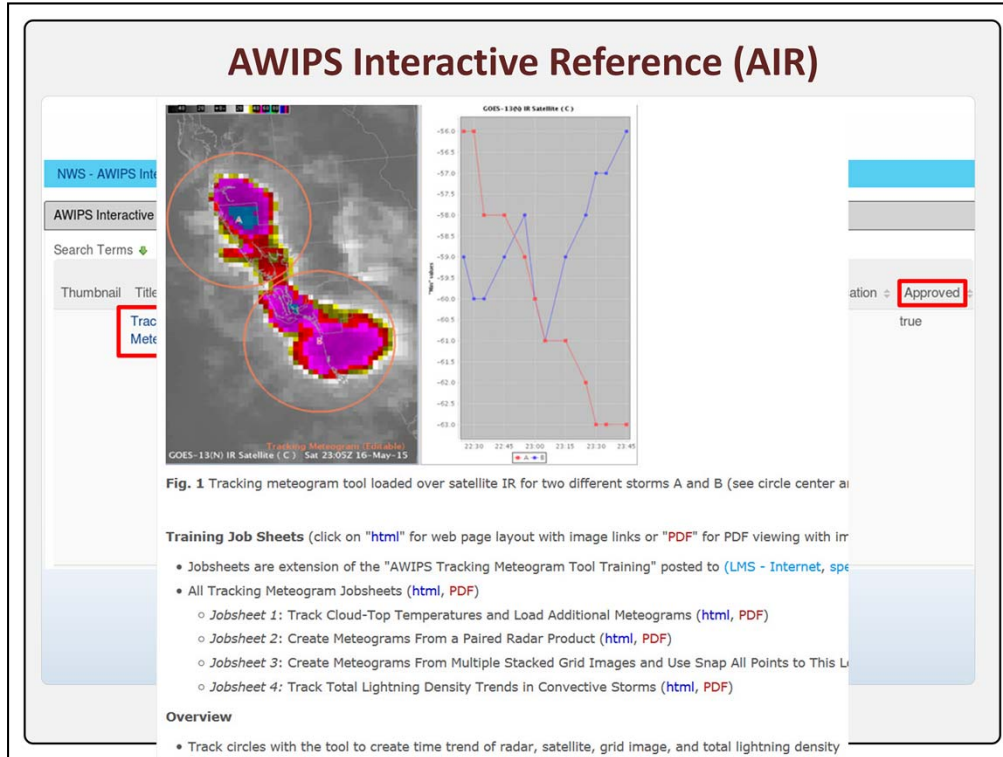
Learning Objectives

After taking this training you will be able to identify the 16.4.1 changes in:

- AWIPS Interactive Reference - **Jobsheet available**
- CAVE GUI Eclipse changes
- 88D alert functionality removed from AWIPS (RPG Build 18 – Fall 2017)
- Removal of obsolete 88D products in WSR-88D Build 17
- Radar Shift Change Checklist product
- Radar VCP selection and AVSET/MESOSAILS via AWIPS (RPG Build 18 – Fall 2017)
- RMRs and OTRs with SAILS are now displayable
- Other Recent Updates
 - Raw Differential Phase (PHIDP)
 - Raw CC
 - Hail Size Discrimination Algorithm

~ 10 min

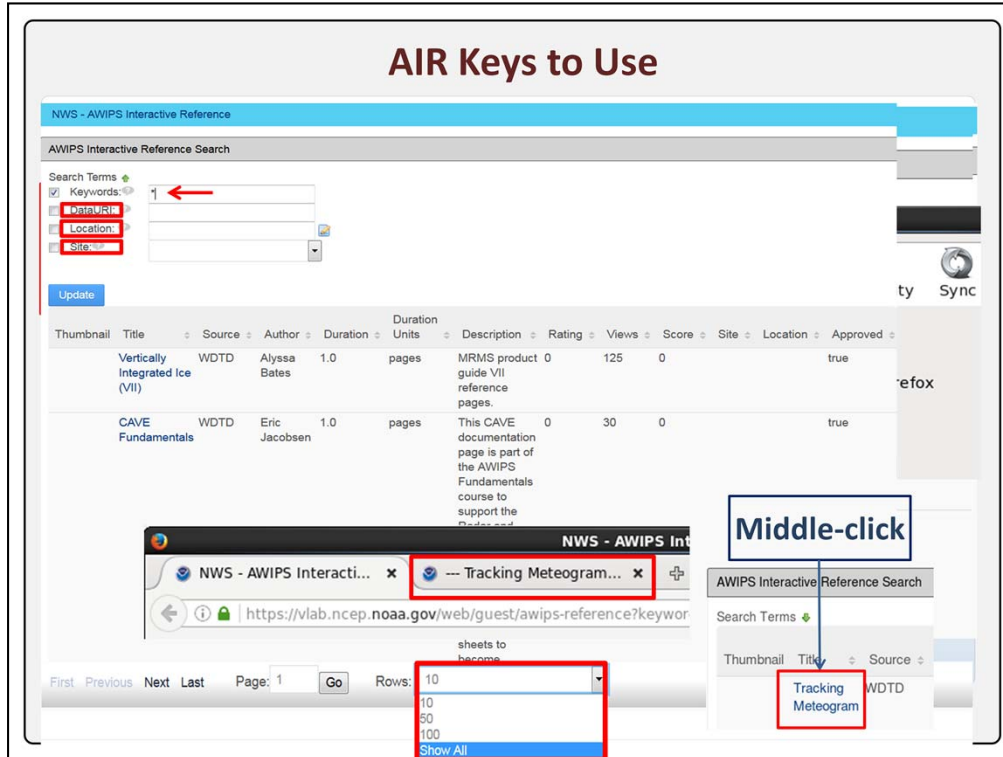
The goal of this training is to provide a general awareness of the following new capabilities and recent changes in around 10 minutes and provide job sheet capability for forecasters where necessary to get some practice with the more involved applications.



One of the significant new enhancements in 16.4.1 is the AWIPS Interactive Reference capability, or AIR for short. This capability allows you to right click on a product or tool legend text and select "Reference on Product" to launch a search tool for related quick-reference material hosted in the VLab. Just click on the link Title in the search results to access the VLab reference. The WDTD Quick Reference format pages like this Tracking Meteogram page are an extension of training in the CLC, and they contain job sheets, an overview, refresher commands, usage tips, and limitations to help bridge the gap between taking the training and integrating it into your operational routines.

The search tool uses the legend text to generate the keywords used in the initial search, and it uses a VLab search routine to only search VLab content that has been specifically registered to work with AIR.

The search tool has some key information in it for you to identify the source, description, and search-score results. Anyone with VLab access can register existing VLab content with tags that the search tool will use. For the initial release, the Source and Approved columns are the primary way you can identify the origins of formal references, like those from WDTD.



The initial search routine hides the keywords, but you can click on the small green arrow next to Search Terms to expand the search interface and manually change the search.

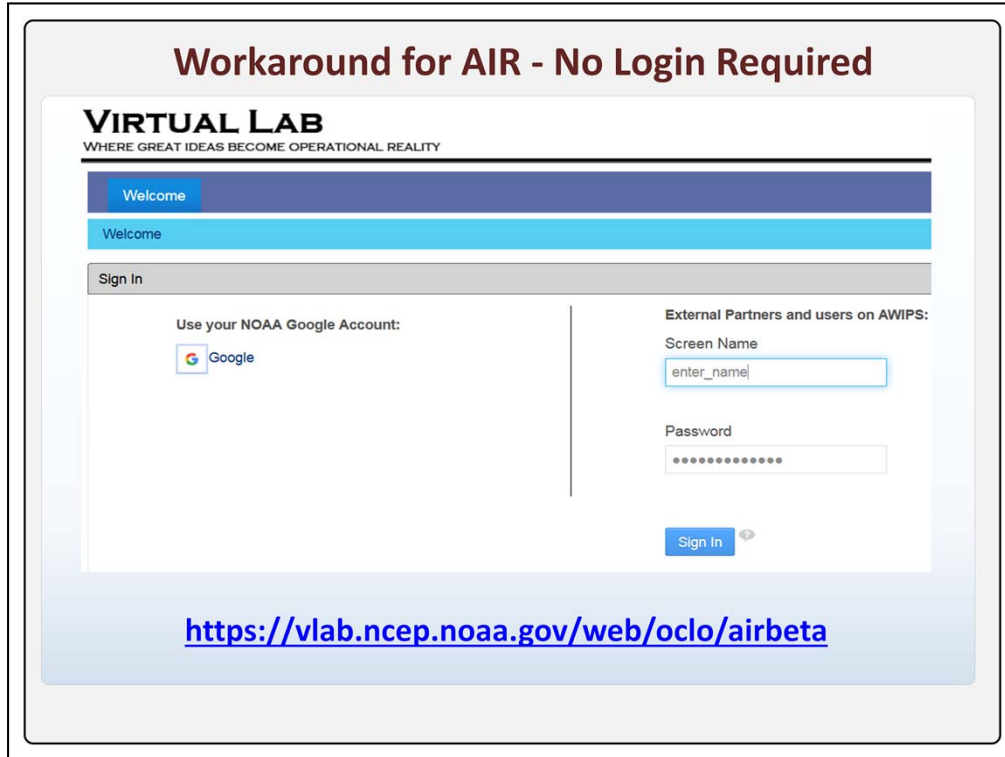
Another useful tip to see all registered VLab content is to enter an asterisk, *, in the Keywords search and “select” Show All in the Rows pulldown menu. In the initial release, WDTD has registered a large number of quick-reference pages covering AWIPS Tools, MRMS, and other AWIPS capabilities described in recent training.

Some of the other search fields like DataURI, location, and site are for future more advanced use. As these capabilities mature and are integrated into references, we will update the AIR job sheet.

One important useful tip is to adjust your Firefox preferences to load in a new tab if you prefer the search tool launch in one browser and not pop up multiple browsers with every search. When you click on the link Title you can also have that load in a new tab by using a middle mouse button instead of the usual left click.

At the end of the presentation we will show you how to access the AIR jobsheet on your LX where you will practice setting your Firefox preferences and using AIR on

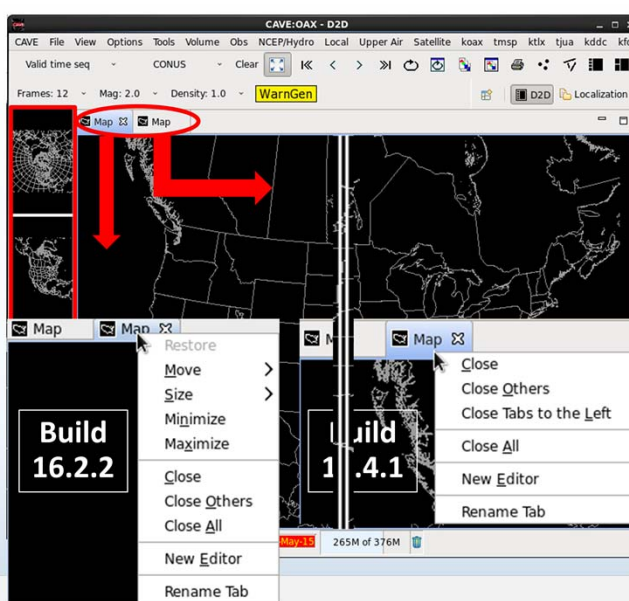
the different types of references available in the initial rollout.



Before you start to use the AWIPS Interactive Reference it is important for your AWIPS Focal Point to download the site override file that allows you to access VLab without having to log in. This workaround was included in the AWIPS Living Release Notes, and if it isn't completed, then you will need to log in to VLab with your NOAA username and password when you use AIR. Here is a link to the instructions.

Eclipse and Java Changes

- May notice appearance changes in CAVE as well as general GUIs

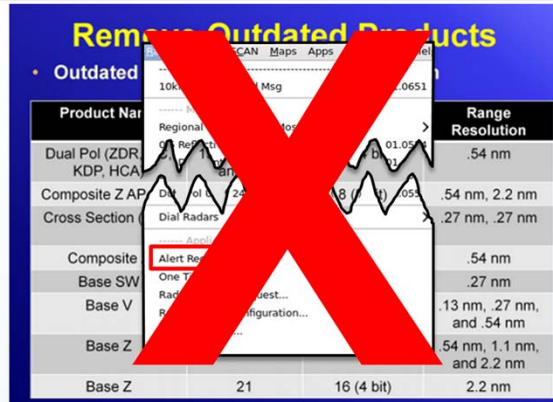


In 16.4.1 you may notice some changes in appearance in CAVE . This is due to changes in Java and Eclipse. In full screen mode, the perspectives menu now appears in the upper right corner in CAVE and cannot be moved. Side panes can no longer be adjusted to width near 0. The minimum width is now 10% of the CAVE window. Some of the menu options in the editor tabs are no longer available. Also moving editors in the main pane to create multiple windows is more dynamic and doesn't require you to drop the editor on the edge of CAVE. These are just some of the more significant changes, so expect to see some other differences in CAVE in this build.

Removed From AWIPS

- Obsolete 88D products removed as part of RPG Build 17

- Living Release Notes has instruction for turning on



Product Name	Range	Resolution
Dual Pol (ZDR, KDP, HCA)		.54 nm
Composite Z AP		.54 nm, 2.2 nm
Cross Section (Dial Radars)		.27 nm, .27 nm
Composite		.54 nm
Base SW		.27 nm
Base V		.13 nm, .27 nm, and .54 nm
Base Z		.54 nm, 1.1 nm, and 2.2 nm
Base Z	21	16 (4 bit) 2.2 nm

- 88D Alert functionality removed to support RPG Build 18 (Fall 2017)

In 16.4.1 a number of lower resolution products have been removed to support changes in RPG build 17.

In the unlikely event you wish to turn these products back on for an old WES 2 Bridge archive, instructions can be found in the AWIPS Living Release Notes. See the Resources in the upper right for the link.

Another capability removed from AWIPS 16.4.1 to support changes in RPG Build 18 is the 88D Alert functionality such as editing alert grids, selecting categories to be alerted on, sending the Alert Request Message, and the UAM product. You can still receive algorithm alerts through SCAN.

Radar Shift Change Checklist (RPG 18)

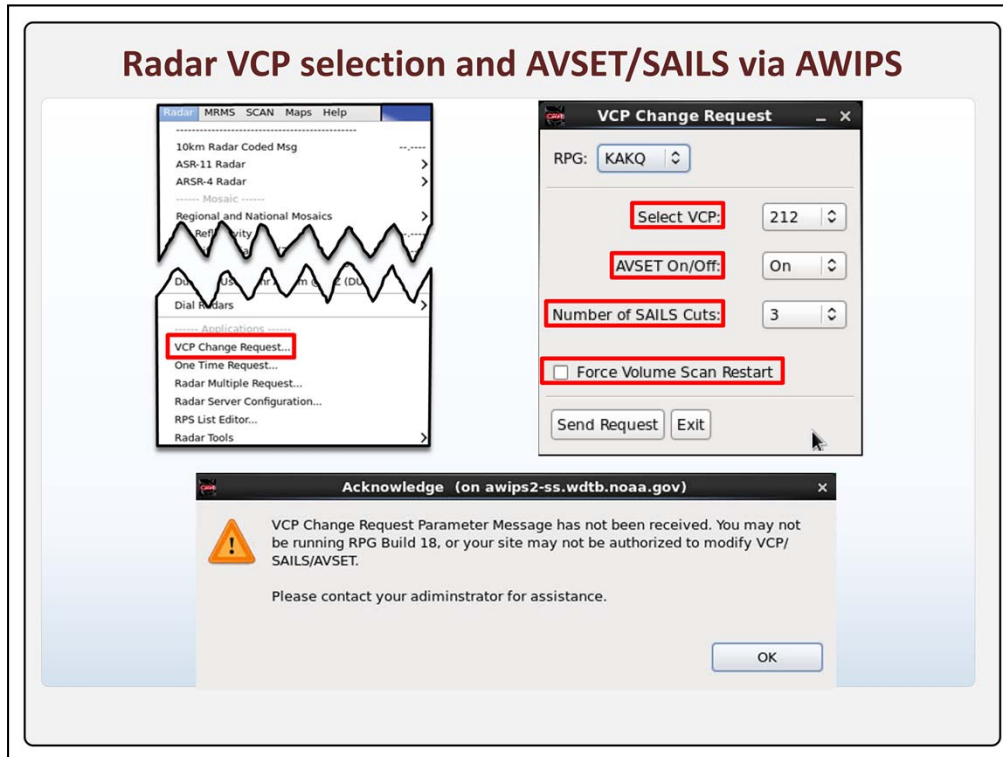
```
File Edit Options Version Tools Scripts Products Help
AFOS Browser Load History WMO Search Enter Editor  Accum  Update Obs Clear
AFOS Cmd:  WMO TTAAlI CCCC:   AWIPS ID: 
Message Date: Apr 27 2016 19:04:39
ICAO: KAKQ Date/Time: 04/27/16 19:04:36 Shift Change Checklist
RDA Status:
RDA Alarm Summary: No Alarms
Operability Status: On-Line
RDA Status: Operate
Control Status: RPG
Transition Power Source (TPS): OK
Aux Power Generator State: Utility Pwr Avail
Super Resolution (SR): Enabled
Clutter Mitigation Decision (CMD): Enabled
Horiz./Vert. Delta dBZ0: -0.09 dB / -0.19 dB
Average Transmitter Power: 1376 W
VCP Number: R212
AVSET Status: Enabled
Archive Level II:
Transmit Status: ???
Version: ???
Mode Selection Function (MSF):
Mode Conflict: NO
Mode Switch Clear Air: Auto < 80 km^2 < 30.0 dBZ for 20 mins
Mode Switch Precip: Auto >= 80 km^2 >= 30.0 dBZ
Mode Conflict Duration: 8 hrs / Ignore NO
Narrowband Communications:
Dedic Connected Users - Line(ID): 1(452)
WSRSC0YYY
```

In 16.4.1, the radar shift change checklist product display was added to the text browser to support RPG build 18, scheduled for deployment during the fall of 2017. This product will assist forecasters coming on shift in getting caught up on the performance and status of the radar and will be required to be completed by forecasters at least once during a shift. The Radar Shift Change Checklist will be a text product tagged with the code WSRSCC and ending with a 3 letter radar identifier. The product will automatically be generated on an hourly basis by a cron using the One Time Request GUI, and it will be centrally collected.

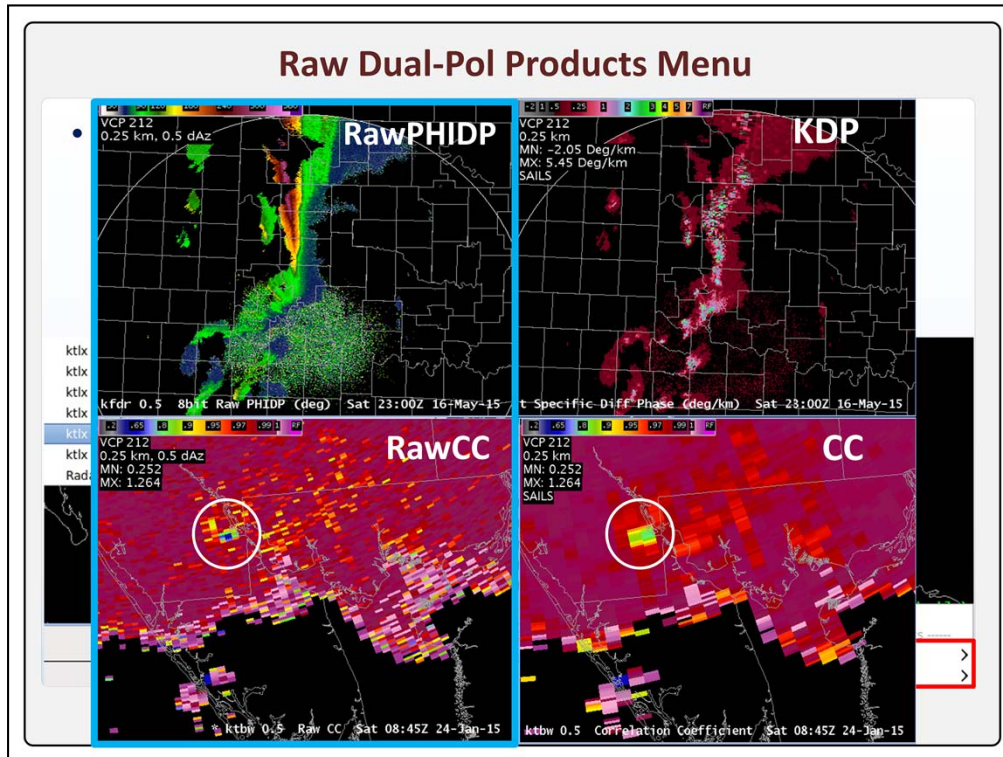
Radar Shift Change Checklist Page 2

```
RDA Performance/Maintenance Data (PMD):
  Generator Fuel Level:          50 %
  Transmitter Air Temperature:  34.6 (deg C)
  Peak Power (Horiz./Vert.):    678.2 kW (192.7 kW / 198.8 kW)
  Performance Check In (Time):  00h00m00s (11/17/15 @ 02:27:27)
RPG Status Information:
  RPG Alarm Summary:            No Alarms
  Operability Status:          On-Line
  Wideband Status:             Connected
  SAILS Status / # Cuts:       Disabled
  Requested SAILS Cuts:        0
  PRF Mode:                     Storm Based
Environmental Data:
  VAD Update/Model Update:     ON / ON
  Temp Heights (0C/-20C):      10.5 / 20.0 Kft
  Wetbulb Heights (0C/-25C):   10.0 / 22.0 Kft
  Default Storm Motion:        225 @ 25.0 kts
Algorithm Status/Data:
  PPS/QPE Precipitation Status: Accum / Accum
  PPS Z-R Relationship:         Z = 300.0*R^1.4
  PPS RAINA/RAINZ/MXPRA:       80 km^2 / 20.0 dBZ / 103.8 mm/hr
  QPE Precipitation Type:      CONTINENTAL
  QPE PAIF Area/Rate/Max Precip Rate: 80 km^2 / 0.5 mm/hr / 200.0 mm/hr
  QPE Multis (GR/HA/DS/DS<ML/IC/WS): 0.8/0.8/2.8/1.0/2.8/0.6
  RPG Est. ISDP / Applied? / RDA ST22: 59 / NO / 294 deg
  MetSignal Processing/Threshold: YES / 80.0
  MetSignal CAPPI Processing:   YES [11.0 dBZ @ 3.0 km]
  Use 2D-VDA:                  YES
```

Here is the second page of the Radar Shift Change Checklist product.



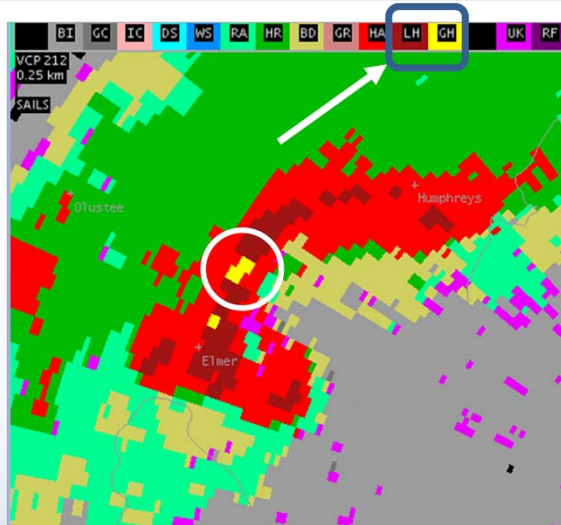
Another capability available in 16.4.1 is the ability to make VCP changes within AWIPS, including selecting the VCP, enabling AVSET, defining the number of SAILS cuts, and forcing a volume scan restart. This enhancement is also dependent on RPG build 18, coming in fall 2017, so you will get this error message if you try and use it before then.



Now that RPG builds 16 and 17 have been released, there are a few Dual-Pol AWIPS display changes worth pointing out that have changed in recent AWIPS builds. The Dual Pol Raw Products menu contains Raw CC and Raw PHIDP products to allow you to see the raw data before any smoothing is performed on it, which can aid in identifying Tornado Debris Signatures and in assessing Dual-Pol data quality.

Hail Size Discrimination Algorithm

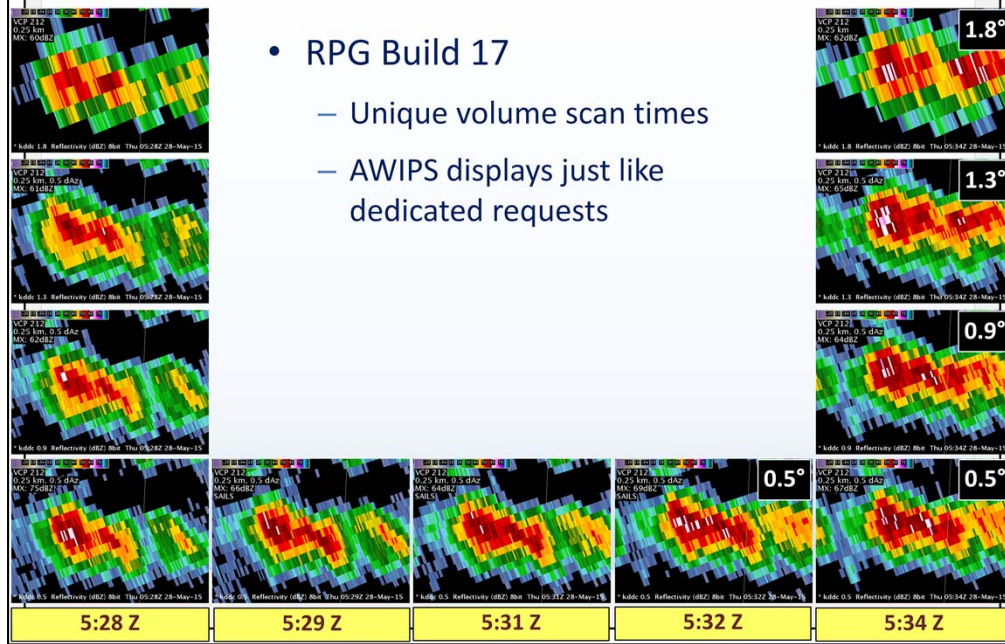
- Upgraded Hydrometeor Classification product (RPG 17)
 - Large Hail (LH)
 - 1-2"
 - Giant Hail (GH)
 - 2"+



With RPG build 17, Large Hail and Giant Hail have been added as 2 new categories in the Hydrometeor Classification product, and AWIPS displays these with dark red and yellow colors. In the new HC display large hail is 1-2 inches and giant hail is 2 inches or larger.

RMR and OTR with SAILS Now Displayable

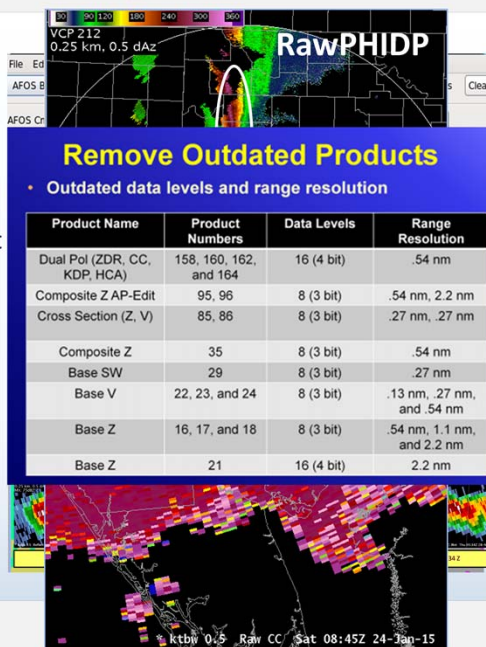
- RPG Build 17
 - Unique volume scan times
 - AWIPS displays just like dedicated requests



Another feature of RPG Build 17 is that routine multiple requests and one time requests of SAILS are now displayable. RMR and OTR SAILS request are now generated with unique volume scan times just like with dedicated radar SAILS requests.

Summary

- AWIPS Interactive Reference
- CAVE GUIs slight change
- 88D alert functionality removed from AWIPS
- Obsolete 88D products removed
- Radar Shift Change Checklist text product
- New VCP Change Request menu
 - VCP selection, AVSET, SAILS cuts via AWIPS
- RMR/OTR SAILS now displayable
- Other recent display changes
 - Raw Dual-Pol Product Menu
 - Raw PHIDP and Raw CC
 - HC large and giant hail



VCP 212
0.25 km, 0.5 dAz

RawPHIDP

Remove Outdated Products

- Outdated data levels and range resolution

Product Name	Product Numbers	Data Levels	Range Resolution
Dual Pol (ZDR, CC, KDP, HCA)	158, 160, 162, and 164	16 (4 bit)	.54 nm
Composite Z AP-Edit	95, 96	8 (3 bit)	.54 nm, 2.2 nm
Cross Section (Z, V)	85, 86	8 (3 bit)	.27 nm, .27 nm
Composite Z	35	8 (3 bit)	.54 nm
Base SW	29	8 (3 bit)	.27 nm
Base V	22, 23, and 24	8 (3 bit)	.13 nm, .27 nm, and .54 nm
Base Z	16, 17, and 18	8 (3 bit)	.54 nm, 1.1 nm, and 2.2 nm
Base Z	21	16 (4 bit)	2.2 nm

ktbw 0.5 Raw CC Sat 08:45Z 24-Jan-15

To summarize, the AWIPS Interactive Reference is a significant new enhancement designed to provide a quick-reference look up for many products and tools in AWIPS. Just right click on a product legend and select Reference on Product to access the references.

In 16.4.1 the appearance of CAVE slightly changed due to the changes in the underlying Java and Eclipse software.

There were lots of radar-related changes in 16.4.1 and in recent RPG builds 16 17 and 18. The 88D Alert menu has been removed and a number of obsolete low-resolution radar products have also been removed.

One enhancement supporting RPG Build 18 in fall 2017 is the Radar Shift Change Checklist text product which will assist forecasters coming on shift to be updated on the performance and status of the radar.

A new VCP Change Request menu has been added to the Radar menu to support RPG build 18, when you will be able to change VCP, AVSET, and SAILS cuts directly from AWIPS.

RMR and OTR SAILS requests are now displayable in AWIPS just like the dedicated requests.

Other recent AWIPS build changes worth mentioning that were not included in previous overviews include the Dual-Pol Raw product menu for Raw differential phase (or PhiDp) and raw CC.

Also with RPG Build 17, the Hydrometeor Classification product now displays 3 hail classes: hail, large hail for 1-2", and giant hail for 2" or larger.

Check Out VLab & Job Sheets

<https://vlab.ncep.noaa.gov/web/oclo/home>

Home Forecaster References AWIPS Fundamentals OCLO VLAB Support

OCLO / Forecaster References / AWIPS Build Changes

Recent Training-Related AWIPS Build Changes

Here is some information about recent improvements in AWIPS builds worth noting:

OB16.4.1 (Dec 2016) - Training Development in Progress (Release Anticipated in Mid December)

- **AWIPS Interactive Reference**
 - The AWIPS Interactive Reference is a new capability in D2D to be able to right click in a D2D editor and access reference materials in the VLab based of what is loaded in the display.
- Eclipse and Java changes implemented in 16.3.1 are deployed in 16.4.1 with some minor changes in buttons and menus
 - Perspectives buttons cannot be moved
 - Side panes can no longer be adjusted to 0 width (min size is 10% CAVE window)
 - Editor right click menus different, no move group tabs option
 - Drag and drop editors to split main panel now no longer requires places on CAVE edge
- Obsolete 88D products (mostly low-resolution products) and 88D Alert functionality removed from AWIPS to support RPG Build 18
 - Radar menu Alert Request menu removed, editing alert grids, selecting categories to be alerted on, sending Alert Request Message, UAM (SCAN alerts not affected)
- Radar Shift Change Checklist text product display
 - Coming with deployment of RPG Build 18 in Fall 2017
 - Required to be completed by forecasters at least once during a shift

Future Training-Related AWIPS Build Changes

Here is some information about upcoming improvements in AWIPS builds worth noting:

OB17.1.1 (Feb 2017)

- Primarily tropical enhancements

OB17.2.1 (July 2017)

- Redhat 7

OB17.3.1 (Summer/Fall 2017)

- Contents TBD

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You are now done with the AWIPS 16.4.1 Informational Overview. Next you should review the AWIPS Interactive Reference job sheet in the VLab to practice accessing available references. Just enter this address in a browser on your LX workstation or on the Web and select AIR under the Forecaster References menu, or type AIR in the AIR search tool after selecting “Reference on Product” in a product or tool text legend.

You can also reference the speaker notes from this training and a summary of the new features in the OCLO AWIPS Build Changes page.

Let me know if you have any further questions, and good luck with the new 16.4.1 capabilities.