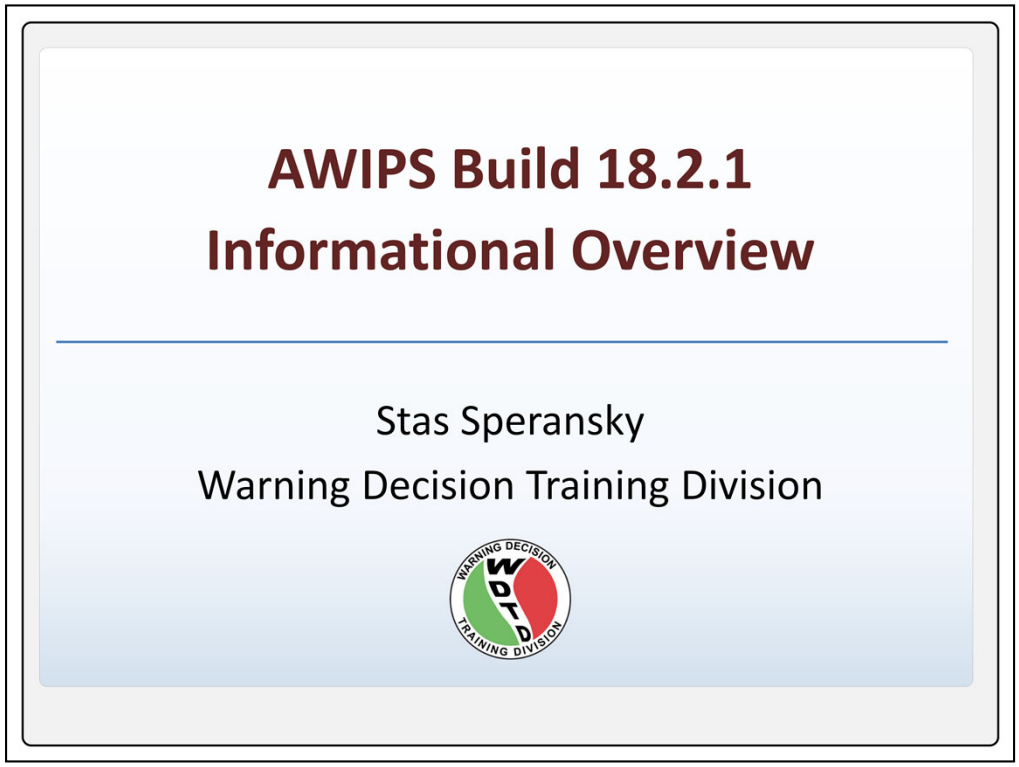
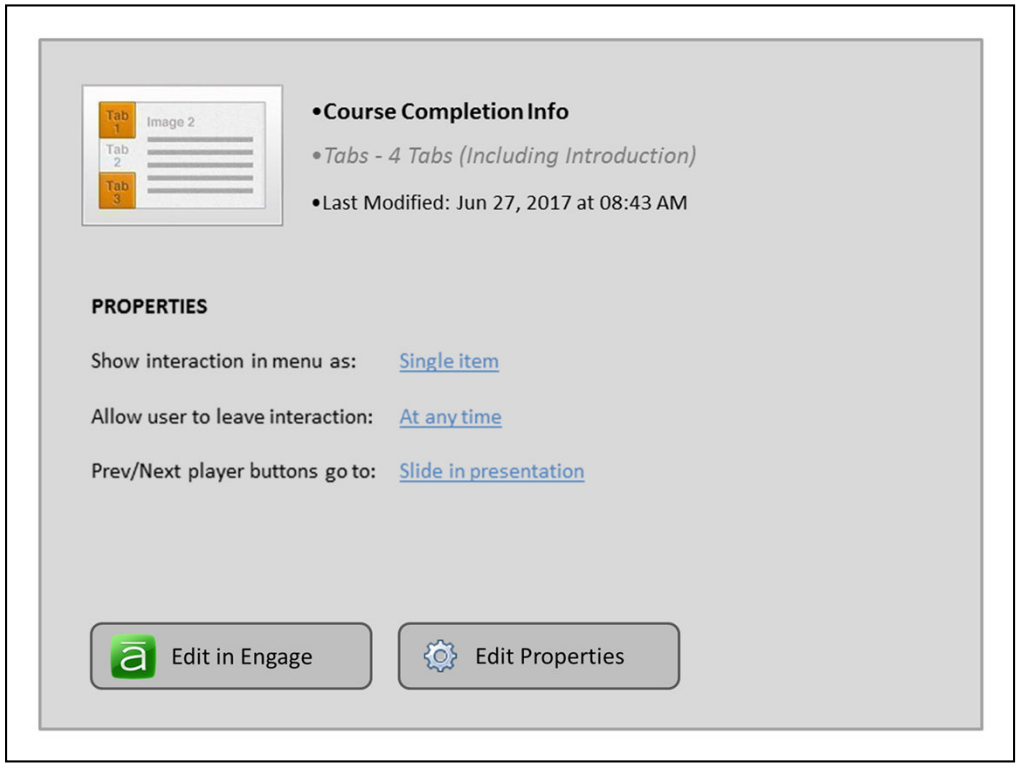
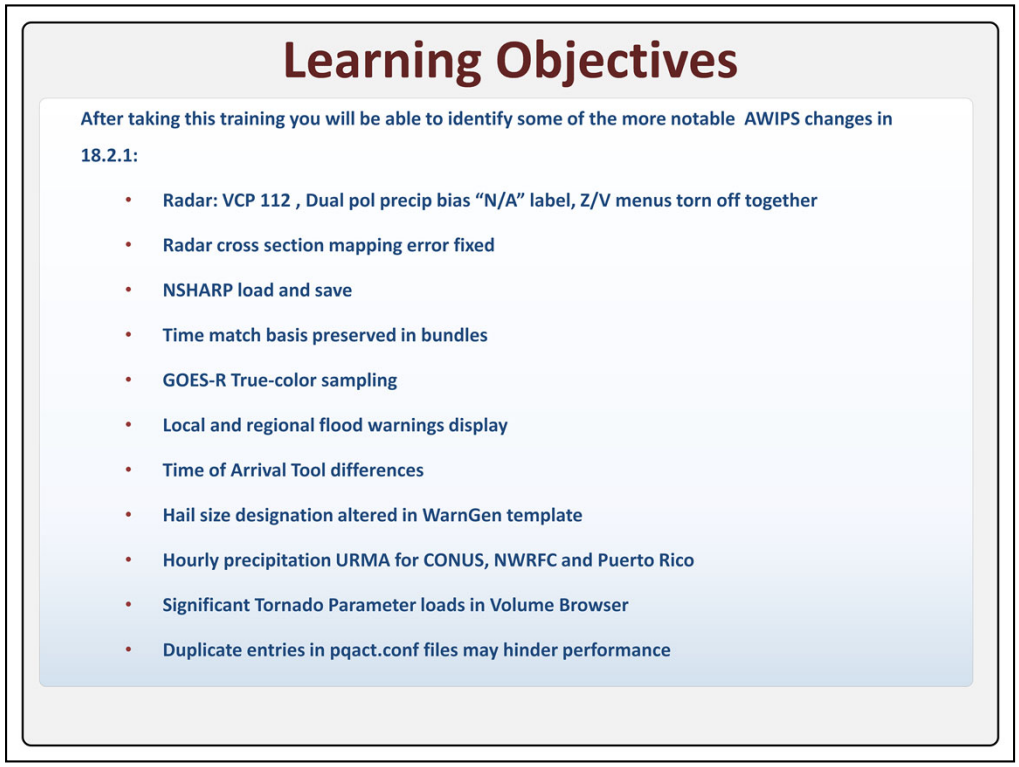
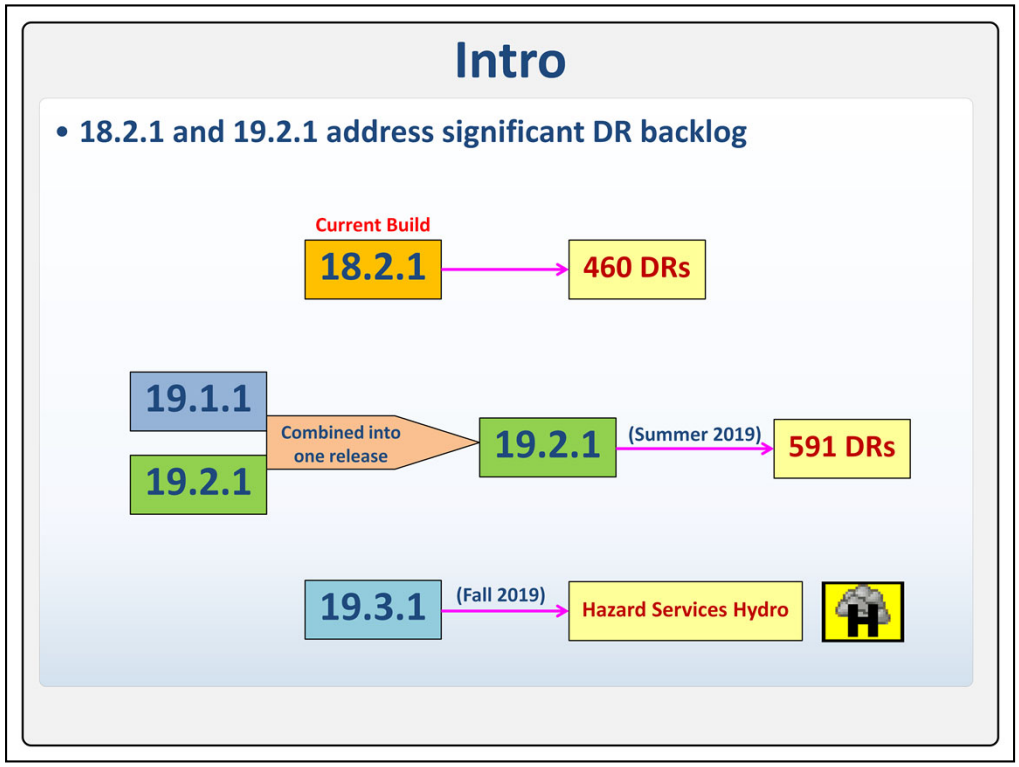


Welcome to the AWIPS Build 18.2.1 Informational Overview. I'm Stas Speransky from WDTD, and I will be introducing you to some of the significant changes in 18.2.1.

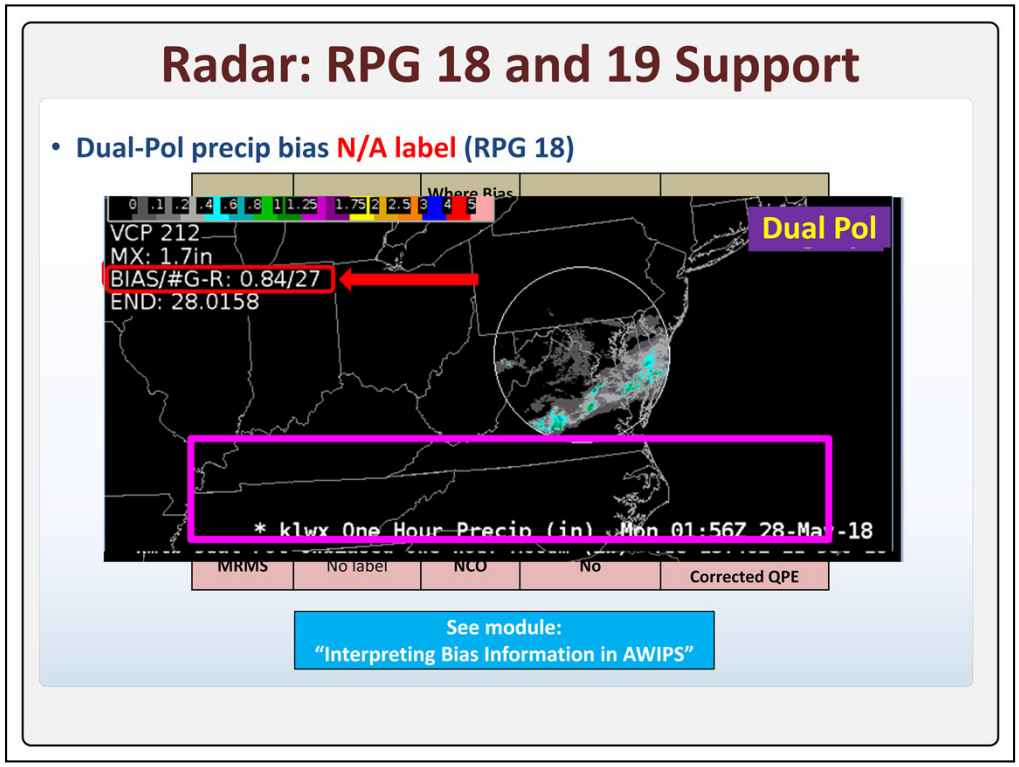

Tab 1
Image 2
Tab 2
Tab 3
•Course Completion Info
•Tabs - 4 Tabs (Including Introduction)
•Last Modified: Jun 27, 2017 at 08:43 AM
PROPERTIES
Show interaction in menu as: Single item
Allow user to leave interaction: At any time
Prev/Next player buttons go to: Slide in presentation
Edit in Engage
Edit Properties



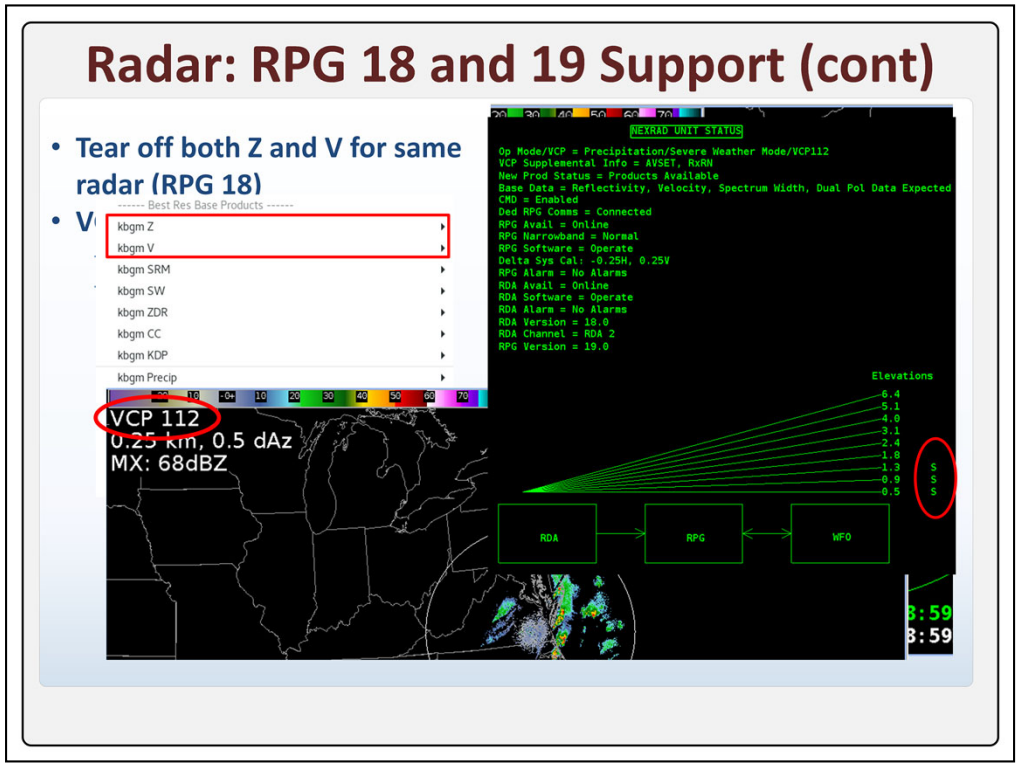
The goal of this training is to provide a general awareness of the following new capabilities and recent changes, for forecasters, in around 10 minutes, including some additional material for focal points.



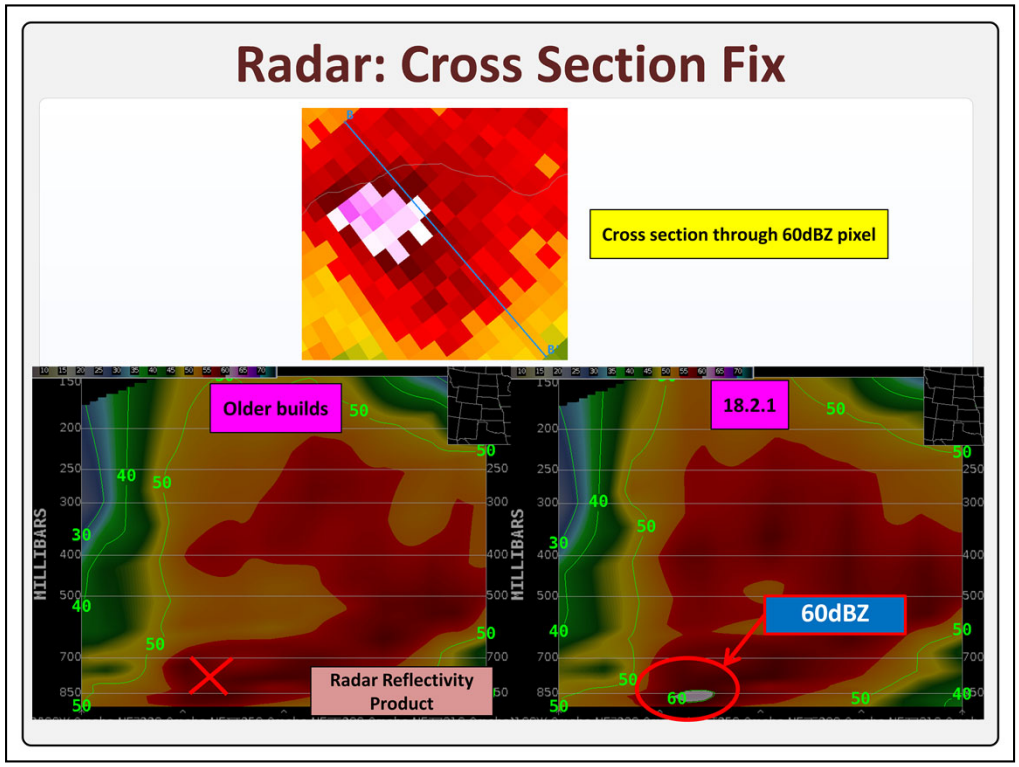
After AWIPS build 18.2.1, 19.1.1 and 19.2.1 will be combined into one 19.2.1 release. One feature of the next two builds is that they address a large portion of the significant DR backlog that has accumulated since AWIPS-2 was fielded in 2015. This overview will address the more commonly used higher-impact changes and some of the small enhancements, but if you would like to see a formatted list of the DRs, see the Resources tab for the 18.2.1 DR spreadsheet. After the DR backlog builds, 19.3.1 is planned to primarily contain Hazard Services, a major enhancement that will provide new hydro product generation capability that will ultimately replace all watch, warning, and advisory generation software in AWIPS. WFOs should anticipate a large amount of focal point training and user training when Hazard Services is deployed to support the significant task of porting all existing hydro configurations over to the the new platform and immediately adopting this new software for primary operations and service backup. If there are no slips in deployment, the training will be released for WFO beta in summer of 2019 and if Hazard Services slips, then this major enhancement will be moved into the 2020 builds.



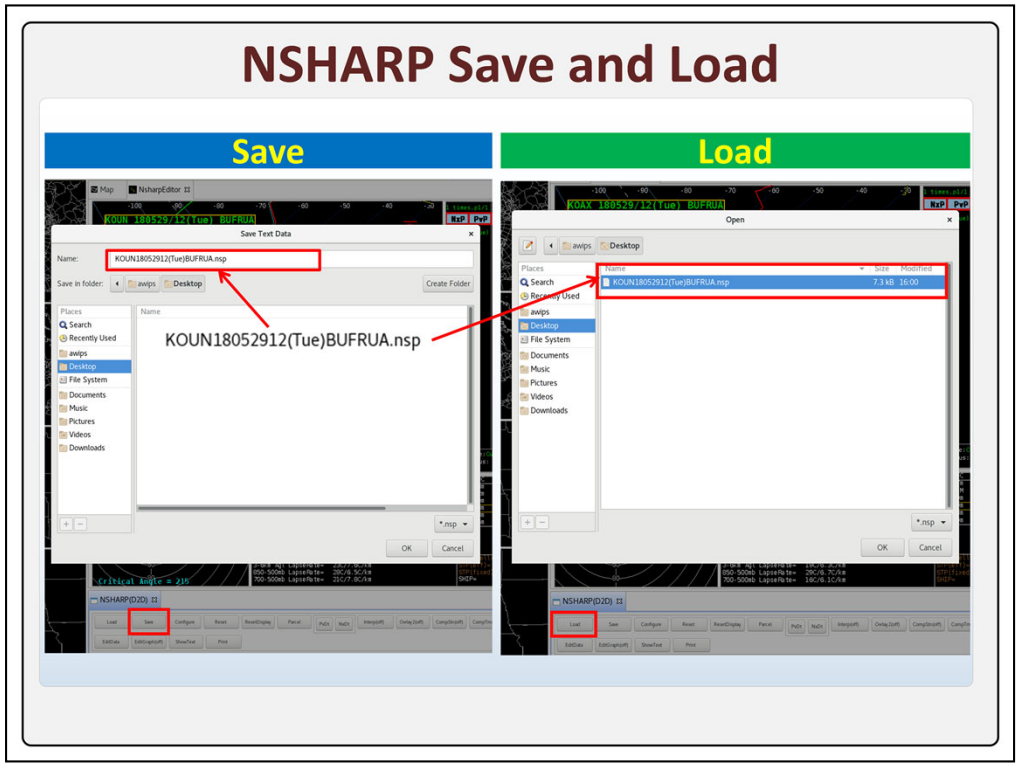
In AWIPS there are three precip sources (legacy, dual pol, and MRMS) that have biases calculated from rain gauge data. The legacy and dual-pol precip products have a text legend in the upper-left part of the product that displays bias factor information. In support of an RPG build 18 change, you will see a new “N/A” label in the BIAS field of dual-pol precip products. Previously, a Legacy DHR-based precip bias was incorrectly displayed on the Dual-Pol products. While N/A is displayed in the Dual-Pol precip product legends, it is important to point out that dual-pol biases are still calculated by the local Multisensor Prediction Estimator, and they are applied by default in the Bias-HPE Dual-Pol mosaic product. For a summary of precipitation bias information in AWIPS, please see this table or review WDTD's module in the CLC titled "Interpreting Bias Information in AWIPS.



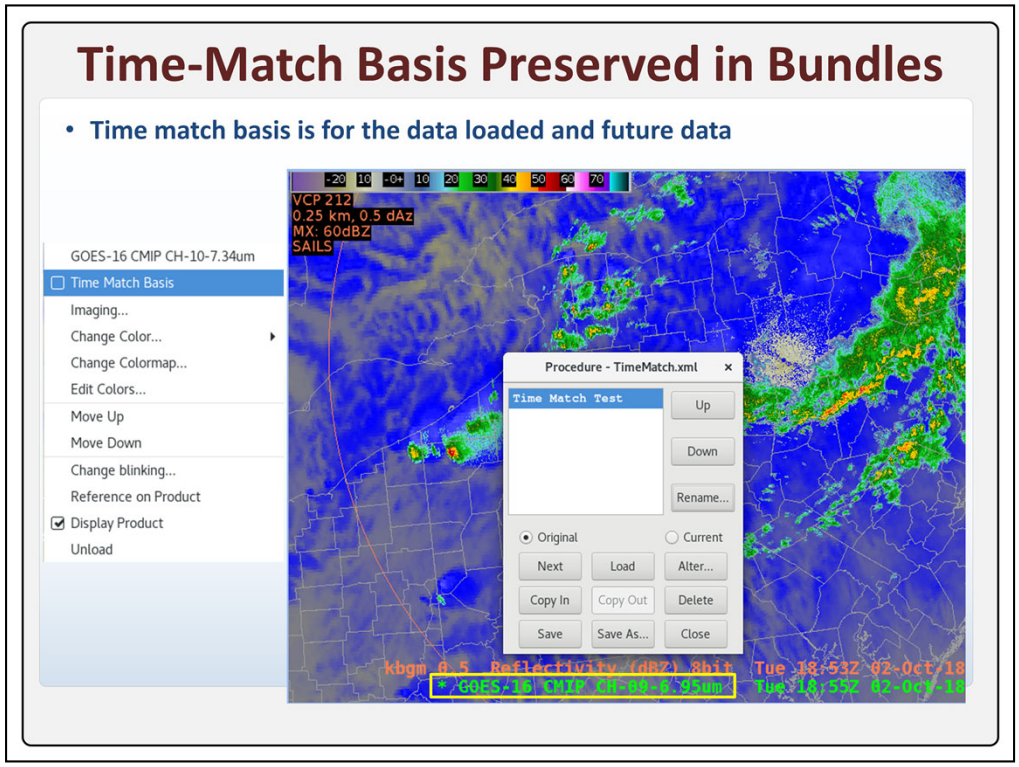
Another radar enhancement in 18.2.1 is that both Z and V product submenus can now be torn off together for the same dedicated radar for the same CAVE session. Before, you could tear off multiple submenus with any combination of products except Z and V for the same radar. With RPG build 19, due later this year, a new VCP 112 has been introduced containing a new Multi-PRF Dealiasing Algorithm (MPDA). This will replace VCP 121 and improve the range folding of velocity data by combining two back to back SZ-2 velocity scans at 0.5, 0.9 and 1.3 degrees.



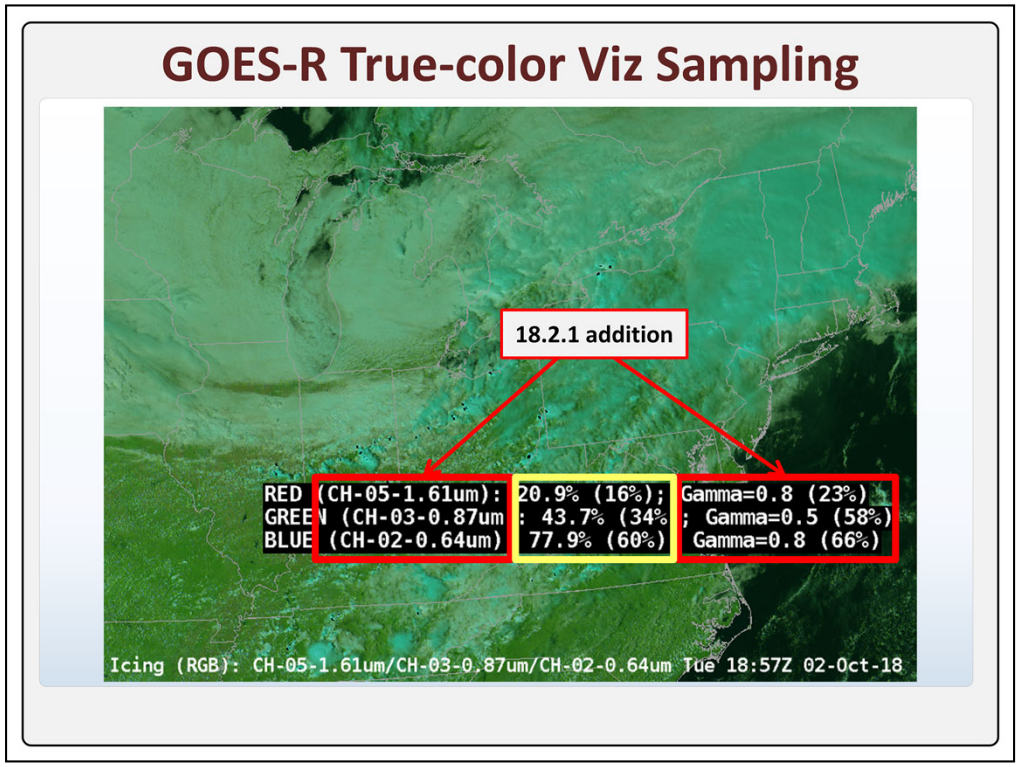
In the past, when using the Volume Browser to display radar data, such as performing a cross section, the data would map incorrectly. The mapping would be off by about 5 nautical miles. This difference can cause you to miss important features when aligning the baselines to perform a cross section. This issue is fixed in 18.2.1. However there's still a limitation as currently only the reflectivity product can be loaded as a cross section from the volume browser.



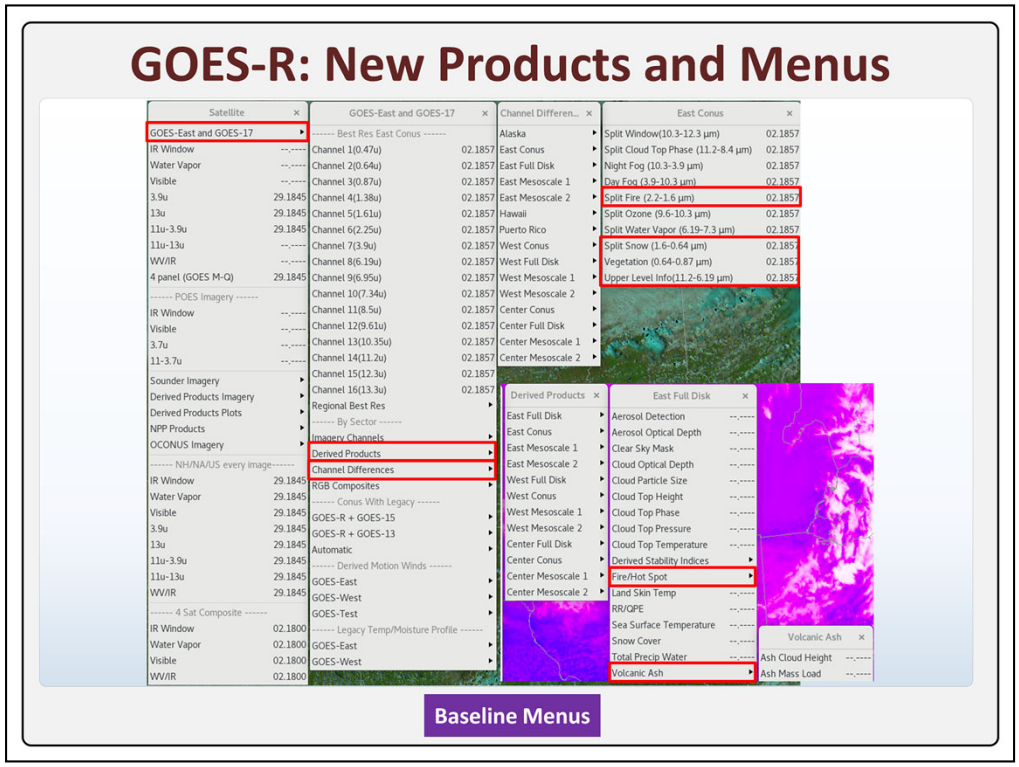
In previous builds, alertviz would throw out an unparseable date error which prevented the user from loading a saved NASHARP display. This issue is fixed in build 18.2.1. In this example, we saved and loaded the KOUN upper air profile from 12z on May 29, 2018.



In Build 18.2.1, time match basis will now be preserved when you save a procedure or a perspective display. Right click and hold on the product legend and select time match basis for a particular product. This forces other data that's currently loaded in the map editor to load the nearest time to the product that is the time match basis for every frame of data.



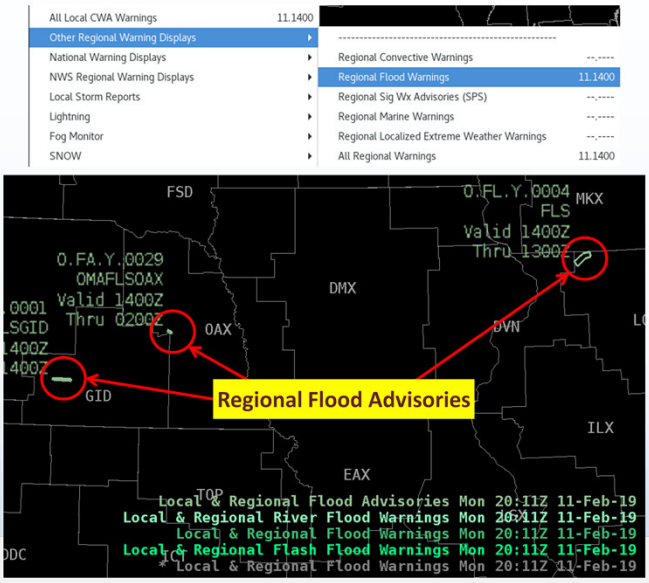
In Build 18.2.1, when you sample a GOES-R RGB composite product, you will now see the channel name and gamma setting displayed. In prior builds, you could only see the red/green/blue channel percentages. This addition can provide more clarity to the user when sampling certain image composites.



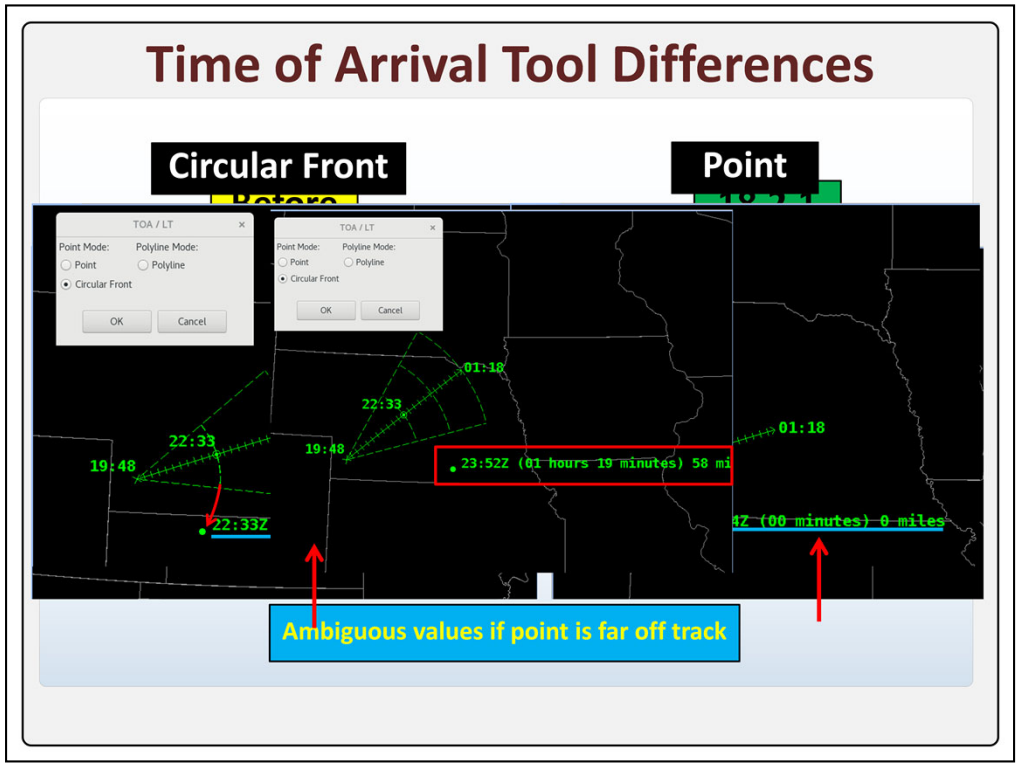
There are some new GOES-R products and menus in this build. However, many of you may have already seen these if you have the new TOWR-S AWIPS RPM installed. This RPM also has more user friendly menu item names to describe each channel. See the Resources tab for a link to the RPM release page.

Display Regional Flood Advisories

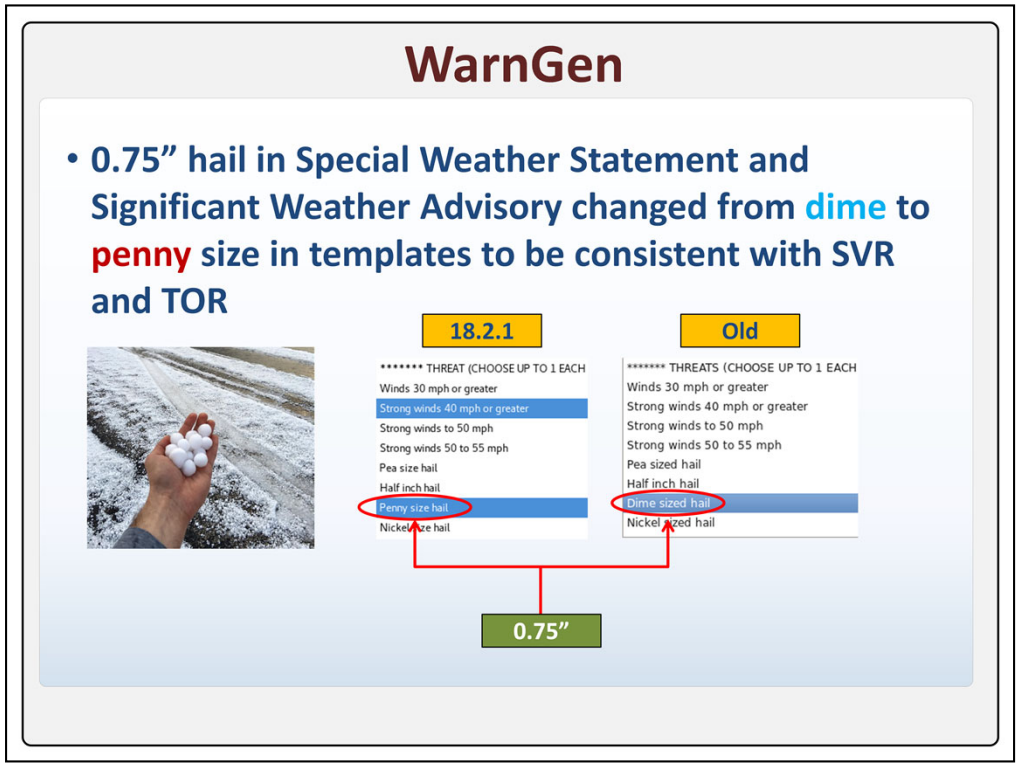
- **Flood advisories from neighboring CWAs now display without issues**



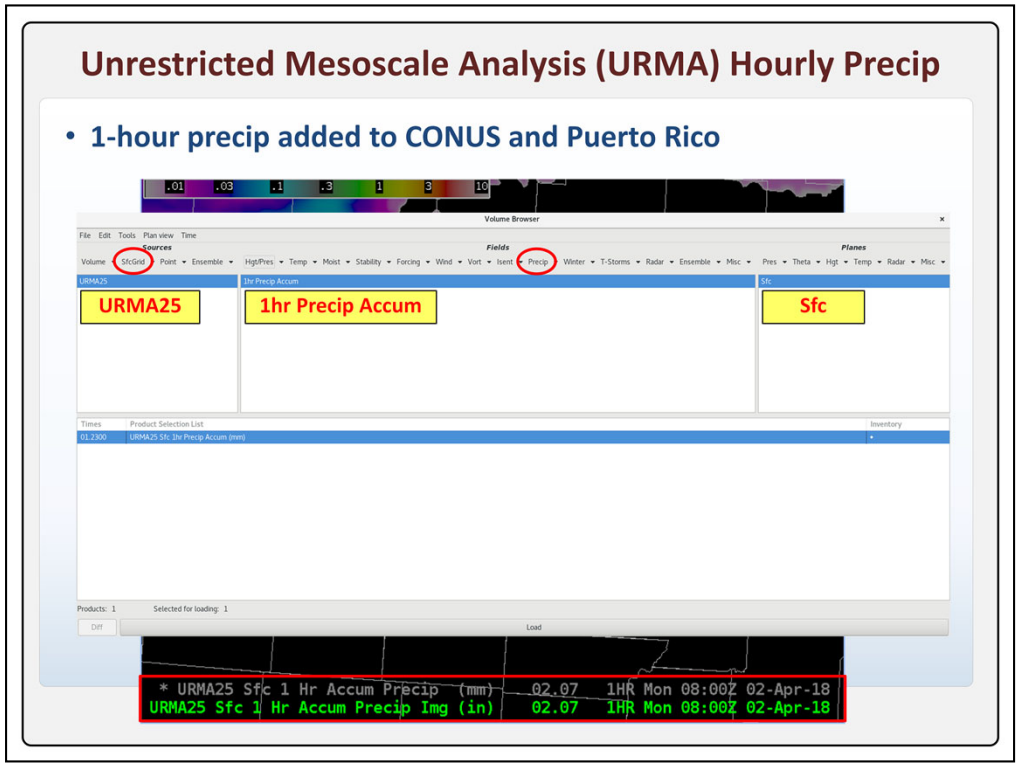
There have been issues in the past displaying regional flood advisories in CAVE. This is now fixed and all the flood advisories from neighboring CWAs should now display.



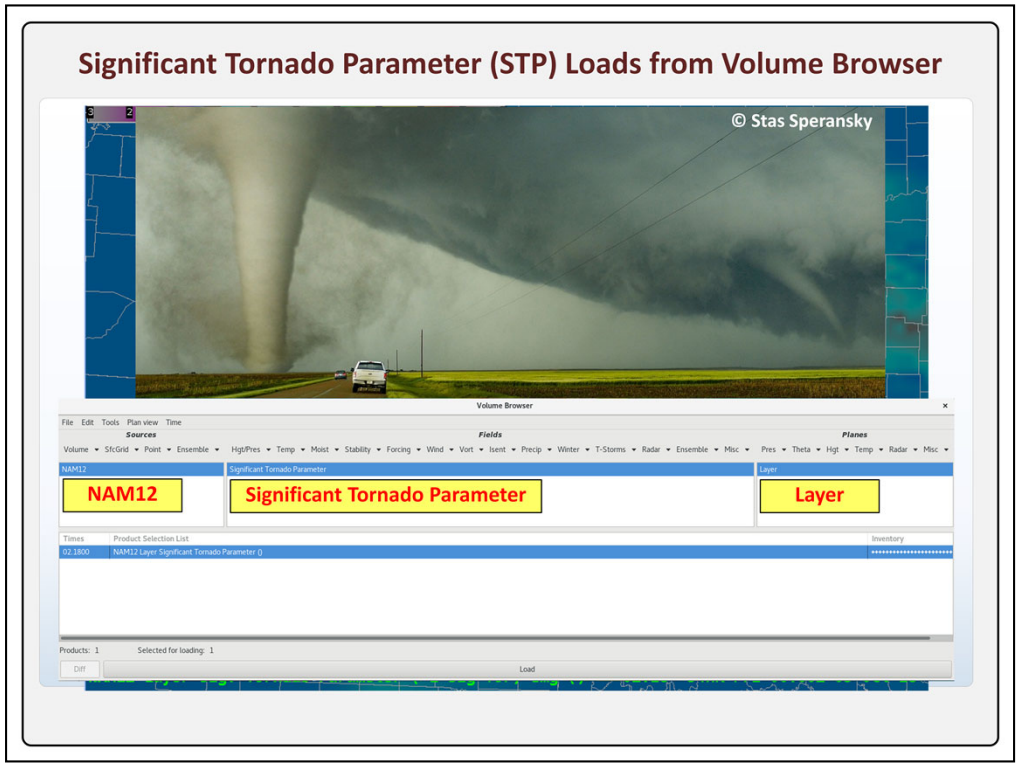
There is one change in behavior of the Time of Arrival Tool in this build. Before, you could get an “Unrealistic Point of Arrival” label when attempting to drag the Point of Arrival icon too far off the track for the point, circular front, and polyline modes. With build 18.2.1, you will only see an Unrealistic Point of Arrival label using the polyline mode, while point and circular front modes are always labeled with arrival values. Be aware that the time of arrival for a point displaced to the side of the centerline is actually calculated using a circular front passing through the current time step for the point and circular front modes. A good way to visualize the implications of this is to move the time of arrival point along the circular front arc at the current time step. You will get 0 miles and 0 minutes for the arrival time anywhere along the arc even though the arrival point may be very far away from the feature you are attempting to track and the feature will never arrive there, which can be misleading. Those who use the point and circular front modes properly and place their points close the track or along the displayed arc won’t notice any difference in 18.2.1 and it will continue to work correctly. For those who move points significantly to the side from the track or displayed arc, you will now see values even though they can be ambiguous.



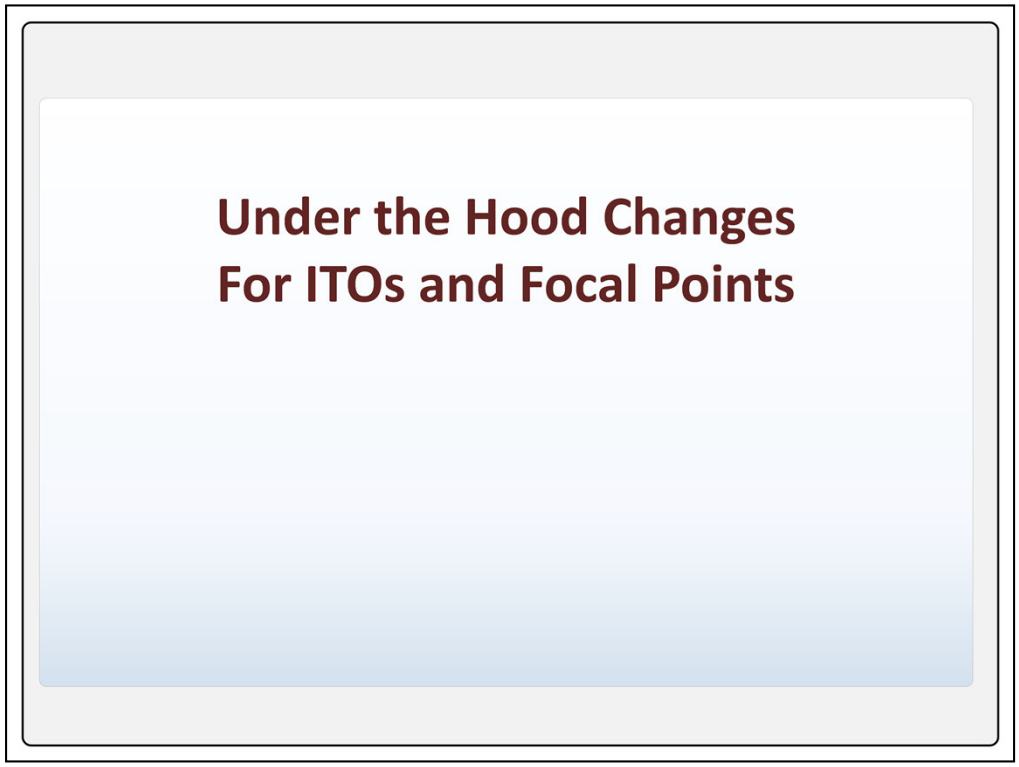
There was an inconsistency in hail size that has been addressed in this build. The Special Weather Statement and Significant Weather Advisory used to code 0.75 inch hail as dime sized, while Severe and Tornado warnings coded 0.75 inch hail as penny sized. To be consistent, 0.75 inch hail in the Special Weather Statement and Significant Weather Advisory has now been changed to penny sized in the template.



In 18.2.1 the hourly RFC Stage IV precipitation accumulation products have been added to the Unrestricted Mesoscale Analysis, or URMA, for the CONUS and Puerto Rico domains. URMA is a version of the Real Time Mesoscale Analysis (RTMA) 2D objective analysis system of sensible weather elements like 2 meter temperature, 10 meter wind, visibility, wave height, etc. These fields are available in the WeatherElement Browser in GFE and in the D2D Volume Browser. The main RTMA is run hourly and is used for real-time nowcasting and situation awareness, while URMA is run up to 6hrs after RTMA to capture all late arriving observations to be used for verification, calibration, and the analysis of record.



18.2.1 comes with the capability of loading the significant tornado parameter or STP from the volume browser. The field was selectable from the T-Storms pulldown menu in previous builds, but it would never display.

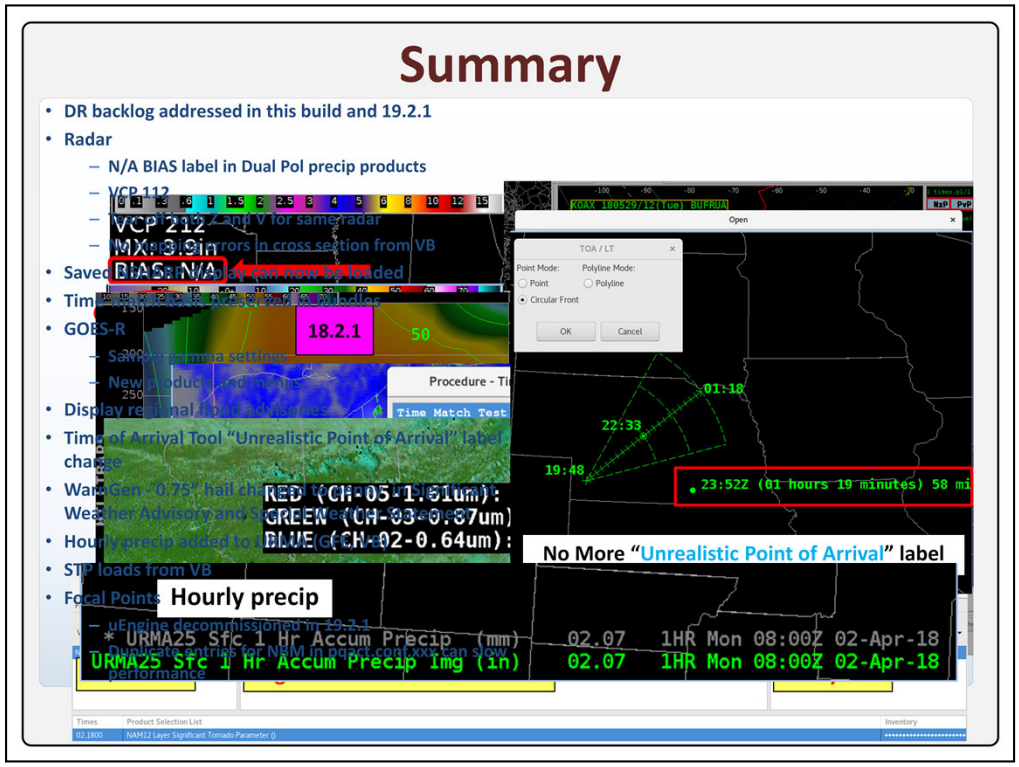


The following slide is for ITOs and Focal points. If you are a forecaster, you may skip the next slide and advance to the summary slide.

For ITOs and Focal Points

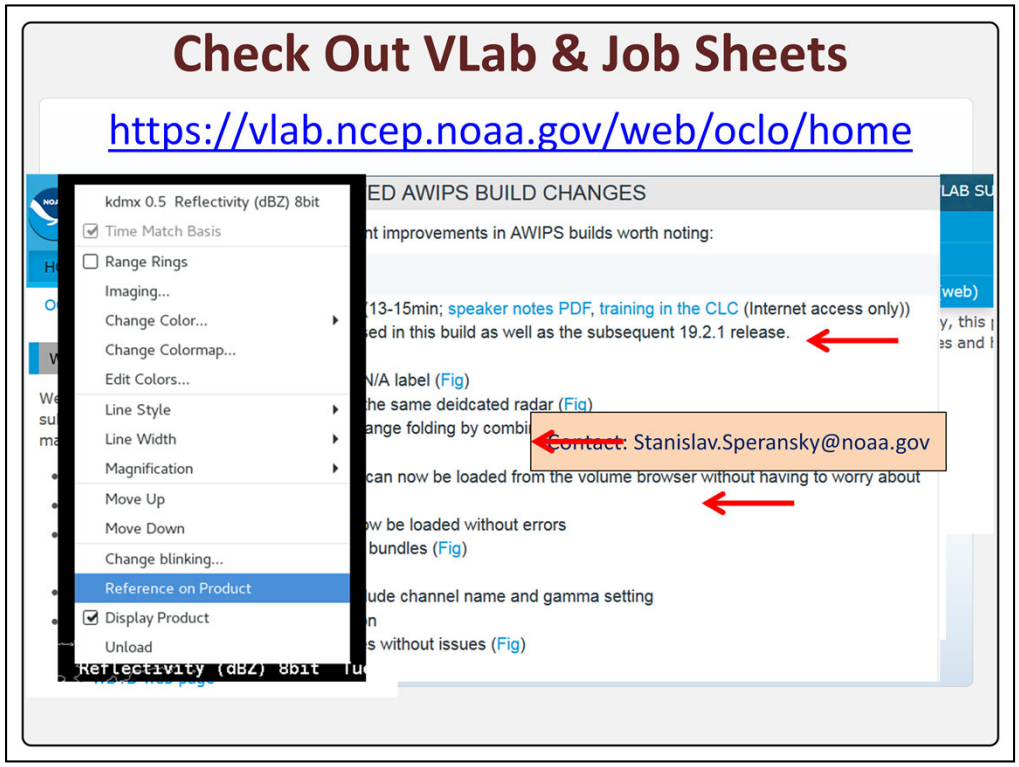
- uEngine will be decommissioned in 19.2.1
- Performance
  - pqact.conf.xxx files may contain duplicate entries for NBM
- AWIPS Performance and Tips in Resources Tab

The microengine will finally be decommissioned in the next build which is 19.2.1. So make sure that you have migrated all local application microengine usage to the Data Access Framework or DAF. See the Resources tab for a link to the documentation. System performance is becoming more of an issue these days, and there is one known performance issue you can prevent. Some sites may have duplicate entries for the NBM in the pqact.conf.xxx file which can unnecessarily increase processing and negatively affect system performance. See the living release notes for more information on removing duplicate entries. In addition, please see the google doc titled AWIPS Performance/Tips. This was put together by Andrew Just and is a good resource for machine performance related concerns such as watching the DX load averages, monitoring qpid, and archiving.



To summarize, 18.2.1, and the subsequent 19.2.1 release will address a significant DR backlog, followed by a 19.3.1 release that is scheduled to contain Hazard Services. Some of the radar upgrades in this build include: an N/A label in the BIAS field of dual pol precip products, a new VCP 112, and the capability to tear off both Z and V products for the same dedicated radar. For the new VCP, you will have to wait until RPG19 is fielded later this year. Additionally, you can now confidently use the radar cross section on a reflectivity product in the volume browser without having to worry about mapping errors. You should now be able to load a saved NSHARP display without issues. Time match basis will now be preserved when you save a procedure or perspective display. In Build 18.2.1, when you sample a GOES-R RGB composite product, you will now see the channel name and gamma setting displayed. The GOES-R submenu has been re-organized in this build. You should now be able to display regional flood advisories from neighboring CWAs without issues. The behavior of the Time of Arrival Tool has changed in this build. Specifically, you can no longer get an unrealistic point of arrival for the point and circular front features. For best practice, don't place points of arrival significantly to the side from the track or displayed arc, or you will end up with ambiguous values for the time of arrival. 0.75" hail in the Special Weather Statement and Significant Weather Advisory has been changed from dime to penny sized in the template to match that of severe and tornado warnings. In 18.2.1 the hourly RFC Stage IV

precipitation accumulation products have been added to the Unrestricted Mesoscale Analysis, or URMA, for the CONUS and Puerto Rico domains. You can now load the Significant Tornado Parameter from the volume browser in this build. For focal points, make sure that you have migrated all local application microengine usage to the Data Access Framework as microengine will finally be decommissioned in 19.2.1. Finally, some sites may have duplicate entries for the NBM in the pqact.conf.xxx file which can negatively affect system performance.



You are now done with the AWIPS 18.2.1 Informational Overview.

Just enter this address in a browser on your LX workstation or on the Web and select the AWIPS Build Changes VLab page from the Forecaster References.

Alternatively, you can right click on a product in the Product Legend in CAVE and select Reference on Product. This will bring up the AWIPS Interactive Reference search page. Type AWIPS Build Changes in the Keywords search then click Update and you should see the Build Changes Page as the top hit.

Let me know if you have any further questions, and good luck with the new 18.2.1 capabilities.