

GR Level 3 Student Guide

This guide is meant to help show students how to use a new radar tool called GR Level 3. Please read through the following instructions...

Getting Started

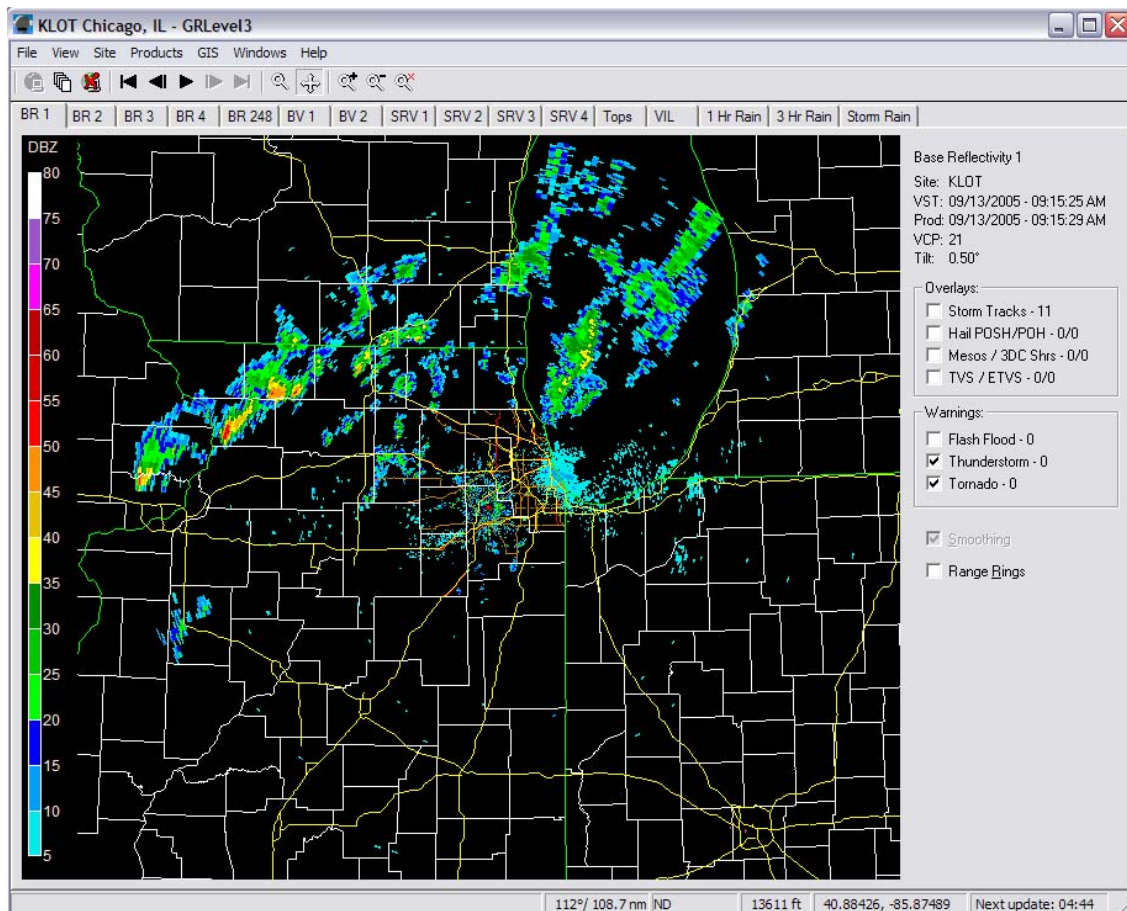
Look for the GR Level 3 Shortcut on any of our computers...



Note: The name of the shortcut may differ slightly

Double click this icon to run GR Level 3

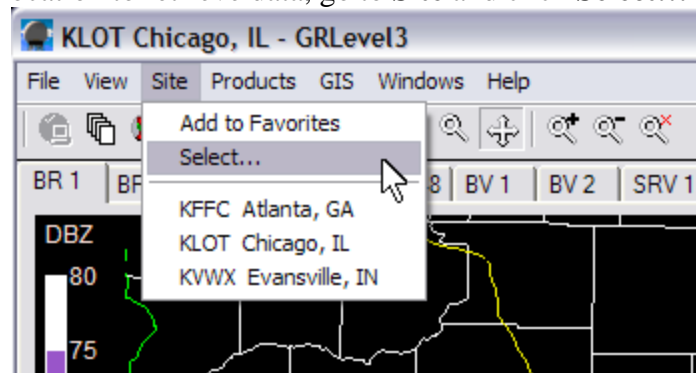
Once the program is running it should already be online and set to a default site



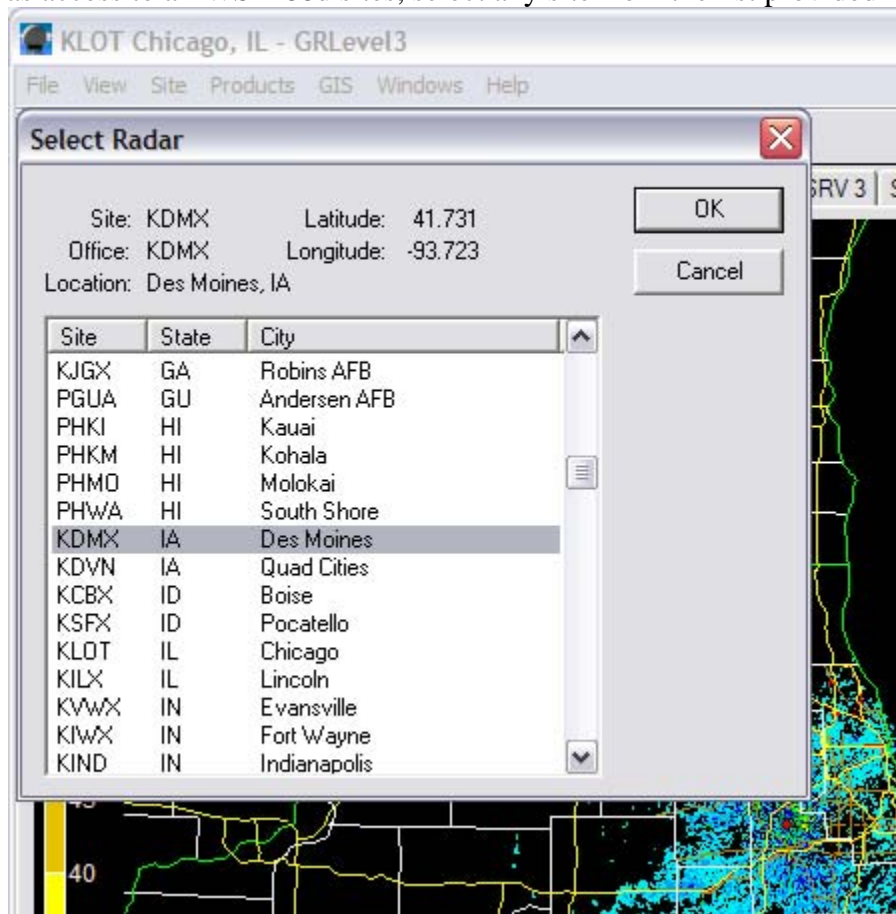
GR Level 3 will only load the latest image, to retrieve a full set of previous scans for the product selected click the **Archiver** button on the top menu bar



To select a different location to retrieve data, go to **Site** and click **Select...**



GR Level 3 has access to all WSR-88d sites, select any site from the list provided



Operating GR Level 3

Familiarize yourself with the following tools:

Looping Features

When on single image



When looping



Pressing the **Play** button will start a loop of all the data available

To stop the loop, click on the **Pause** button

The first and last buttons jump to **First Volume Scan** (earliest image) and **Last Volume Scan** (latest image)

The other buttons advance to **Previous Volume Scan** and **Next Volume Scan**

Scanning Modes



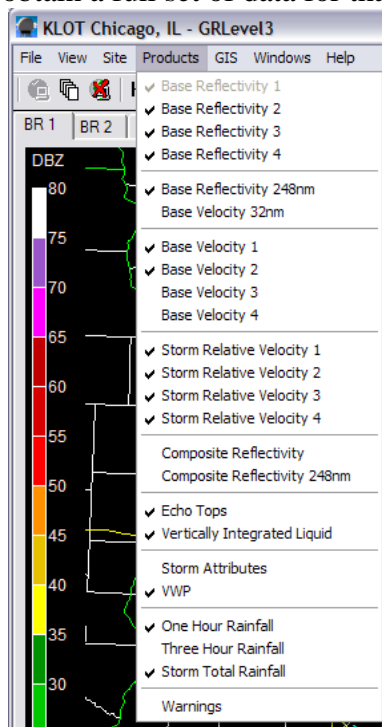
The default scanning mode is **Panning Mouse**, with this mode selected you can click and drag on the radar image to move the image around the screen.

The feature on the left side of the image above is **Zooming Mouse**, with this mode selected you can click anywhere on the radar image and drag the mouse to create a boxed area that will be magnified.

*Note: You can also zoom in on a radar image by either scrolling your Mouse Wheel up and down, or by clicking on the **Zoom In** and **Zoom Out** buttons which are just to the right of the scanning mode buttons.

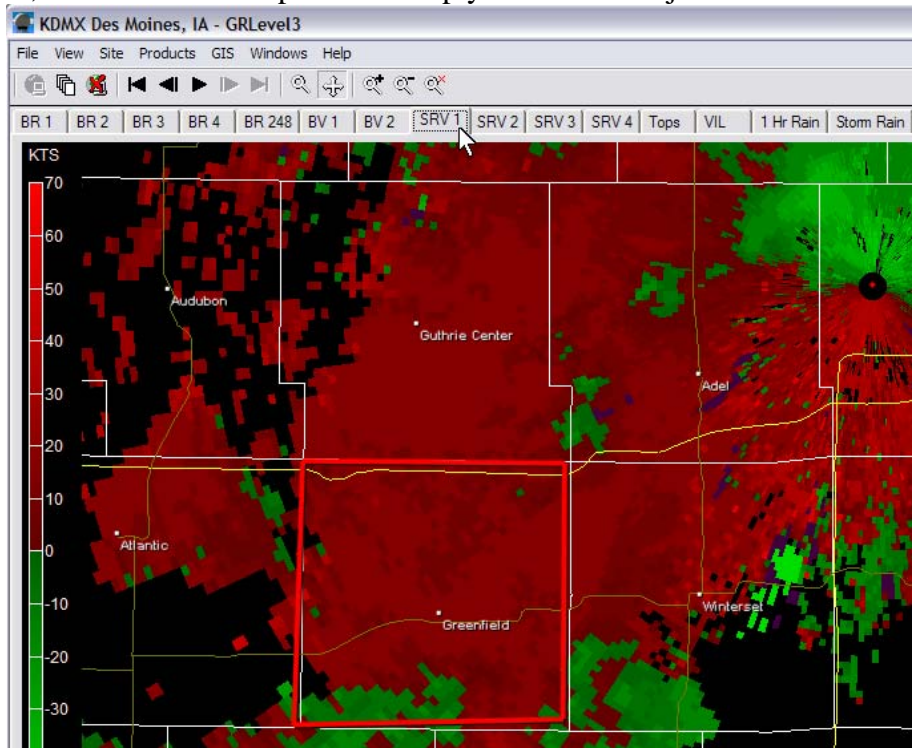
Activating and Using Different Products

GR Level 3 provides full NIDS data from all WSR-88d sites throughout the country. When running GR Level 3 for the very first time you will only have BR1, or the lowest tilt of base reflectivity available. To activate more products, go to **Products** and select all desired products. Then click on **Start Archiver** to obtain a full set of data for that product.

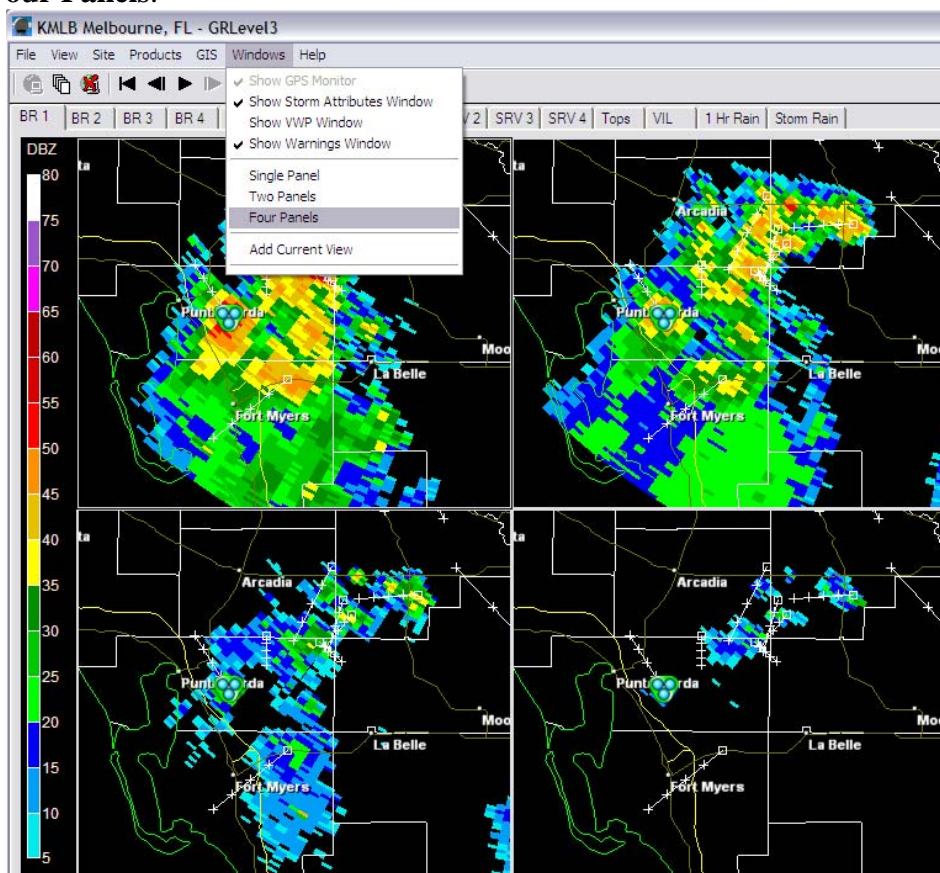


It is recommended that you select at least the products that are marked in this image

Once activated, to select different products simply click the tabs just above the radar image

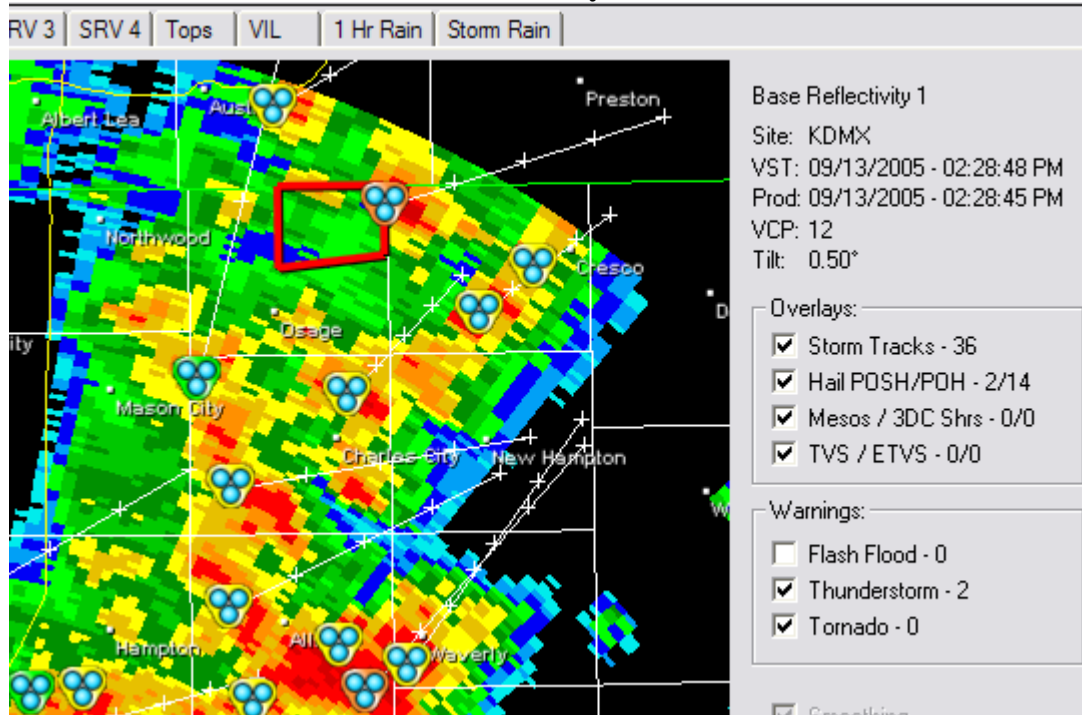


You can also enable two panel and four panel displays to compare different products simultaneously. To enable two or four panel display, click on **Windows** and click on either **Two Panels** or **Four Panels**.



To change products between panels, click on the panel you wish to change and then select the product you want.

GR Level 3 has a feature called **Overlays**. These are options that when selected will overlay data about each particular storm that can be viewed out of the site selected. To activate these products, check the desired boxes under the **Overlays** section.



Note: The overlays in this image have been customized

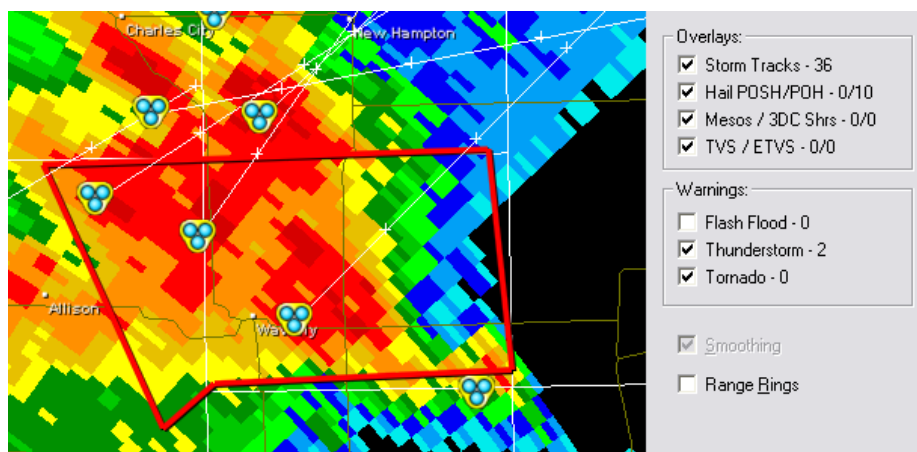
Storm Tracks show a predicted path for the storm and include markings at 15 minute increments. The final mark is an estimation of the storms location in the next hour.

Hail POSH/POH show the probability for hail with a particular storm. POSH is an acronym for Probability of Severe Hail, and POH stands for Probability of Hail. The default representations of these overlays are green triangles that will vary in size depending on greater probabilities of hail.

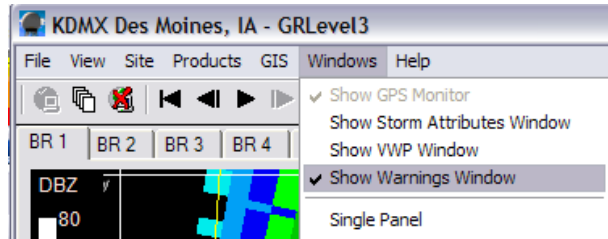
Mesos / 3DC Shrs stand for Mesocyclones and Three Dimensional Correlated Shear. A Meso will appear as a red circle and indicates that the radar has detected a mesocyclone. 3DC Shrs signals will appear as orange circles and indicate that the radar has detected rotation that has not met Mesocyclone criteria.

TVS / ETVS refer to Tornado Vortex Signature and Elevated Tornado Vortex Signature. These overlays appear as purple triangles and indicate that the radar has detected a developing tornado.

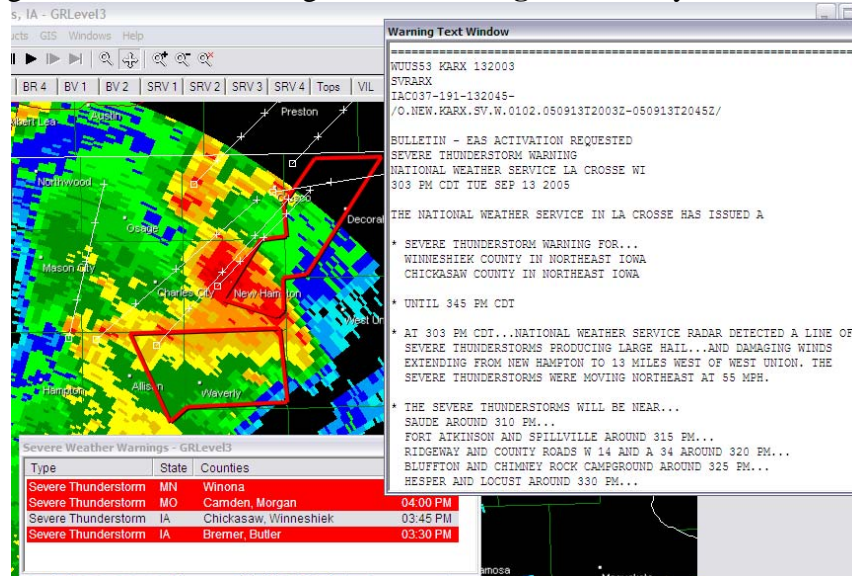
GR Level 3 can also display Severe Weather Warnings and the areas they affect on the radar image. To activate these products, select the desired warnings to be displayed in the **Warnings** box.



You can also retrieve the text for each warning in effect by activating the **Warnings Window**. To activate, go to **Windows** and click on **Show Warnings Window**.

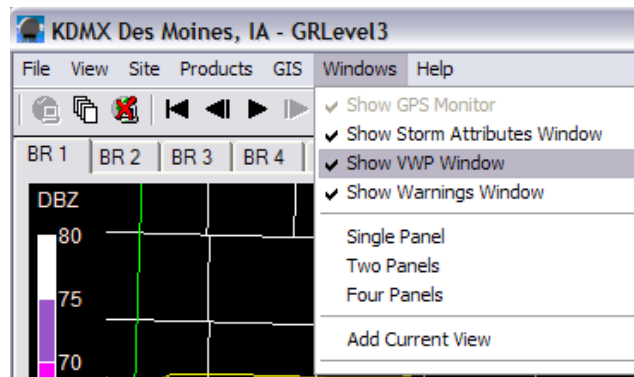


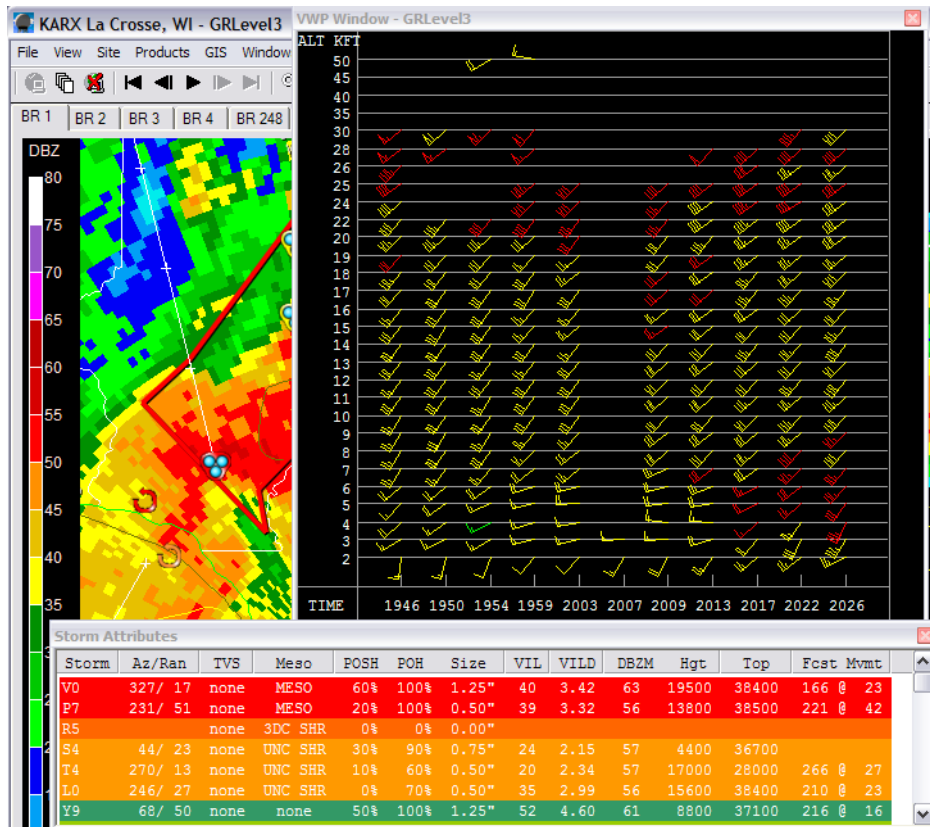
Then to retrieve the text for a certain warning, right click on the warning in the **Warnings Window** you wish to read



Storm/Cell Information and Attributes

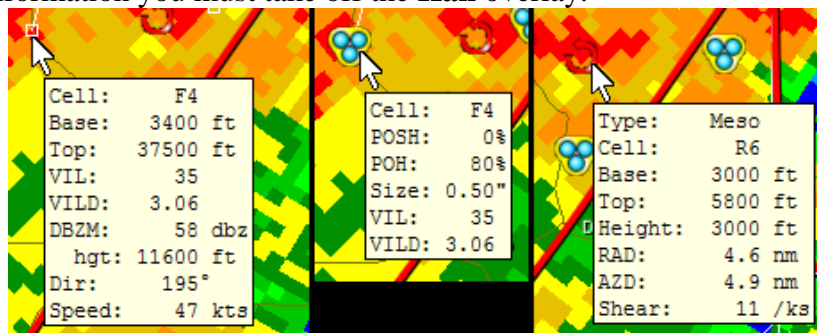
GR Level 3 has a couple ways of displaying information about any storm and the storm environment. One way is to activate two different windows, one is the **VWP Window** or Vertical Wind Profile which shows winds with height over time. The other is the **Storm Attributes Window** which shows all of the details of each individual storm. You can snap the image to any storm by double clicking on the Cell in the **Storm Attributes Window**. Both of these windows are activated by going to **Windows** and clicking on **Show Storm Attributes Window** and **Show VWP Window**.



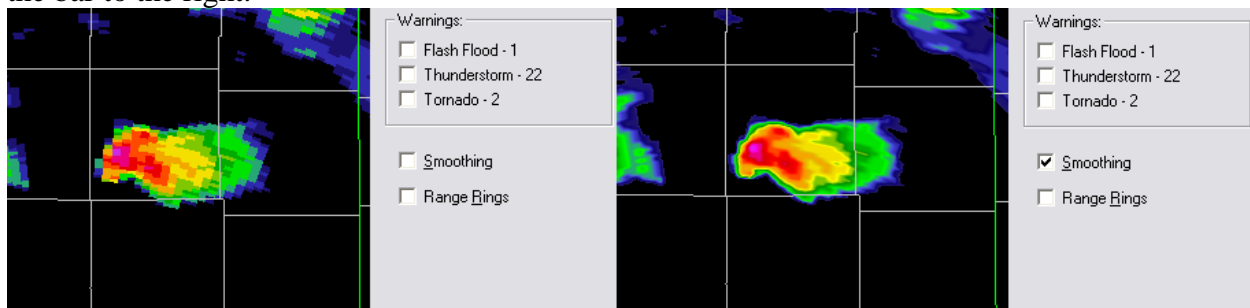


Note: **Warnings** and **Storm Attributes** can also be activated in the **Products** menu

Another way to view storm information is by simply placing the cursor over the storm you wish to know more about. The type of information displayed will depend on what overlays you have activated. In the case of **Hail** and **Storm Tracks**, these overlays always stack, so to view the **Storm Track** information you must take off the **Hail** overlay.

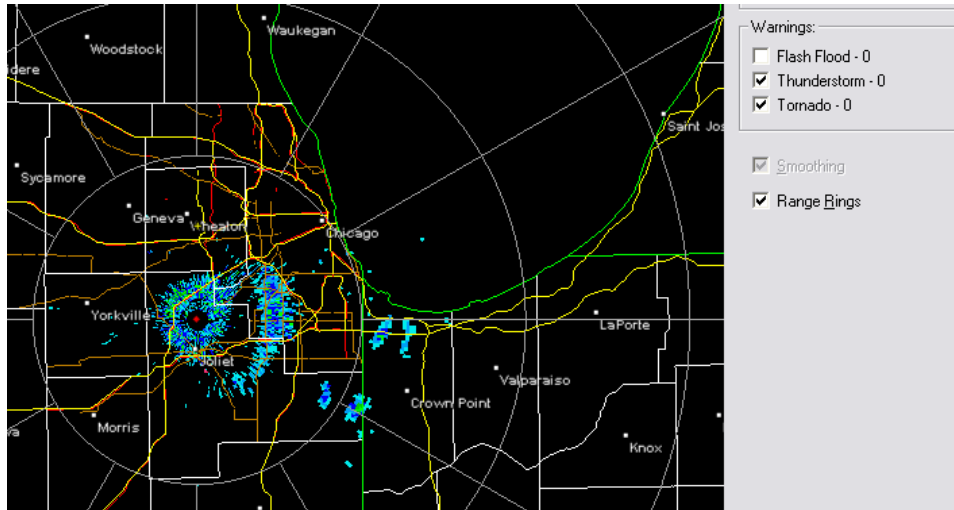


You can also use **Smoothing** to smooth out the colors from gate to gate, making the image visually more understandable. To use this feature, check the box labeled **Smoothing** located on the bar to the right.

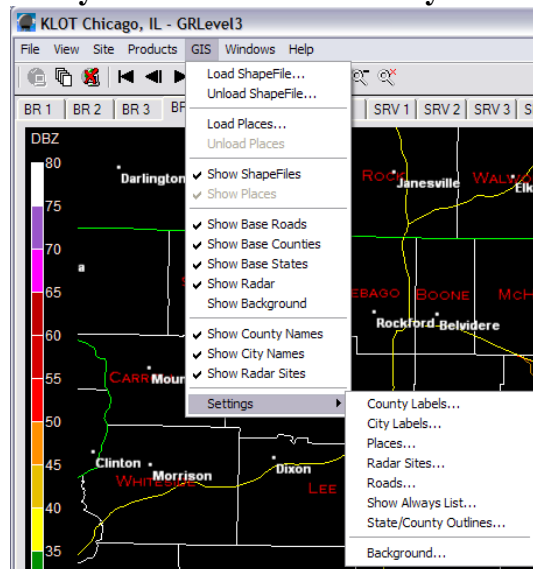


Please Note: Because GR Level 3 uses a more rigorous method for smoothing that GR Level 2, this feature will not be available on computers that do not have a satisfactory video card.

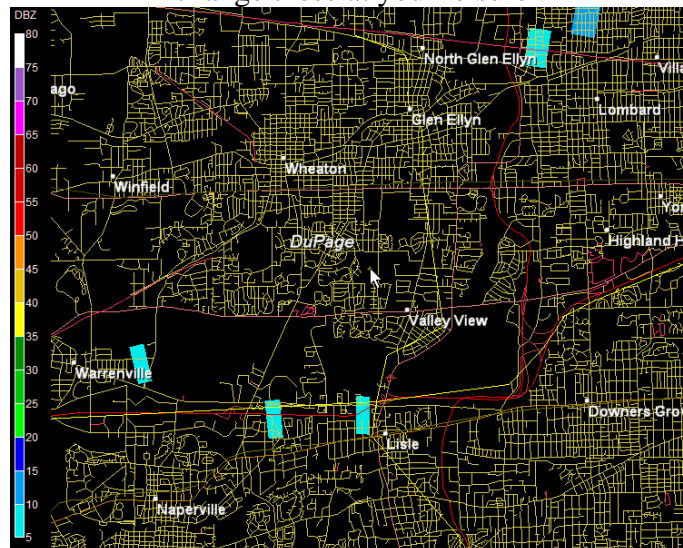
You can also activate range rings to make it easier to “eyeball” distances and directions; to activate, check the box for **Range Rings**.



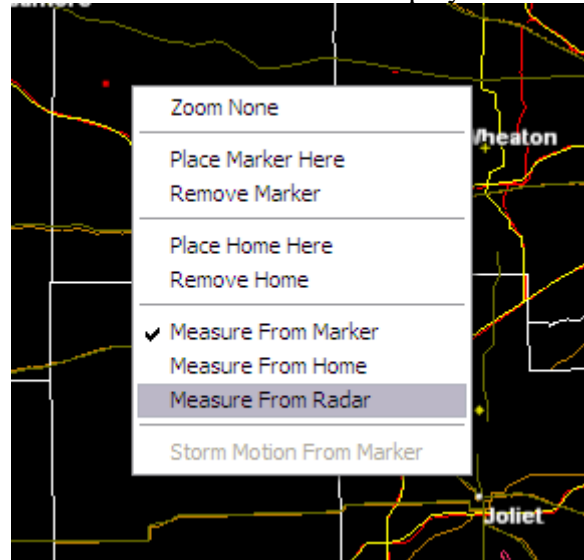
GR Level 2 can also display **City Names** and **County Names**. To activate city and county names go to **GIS** and click on **Show City Names** and **Show County Names**.



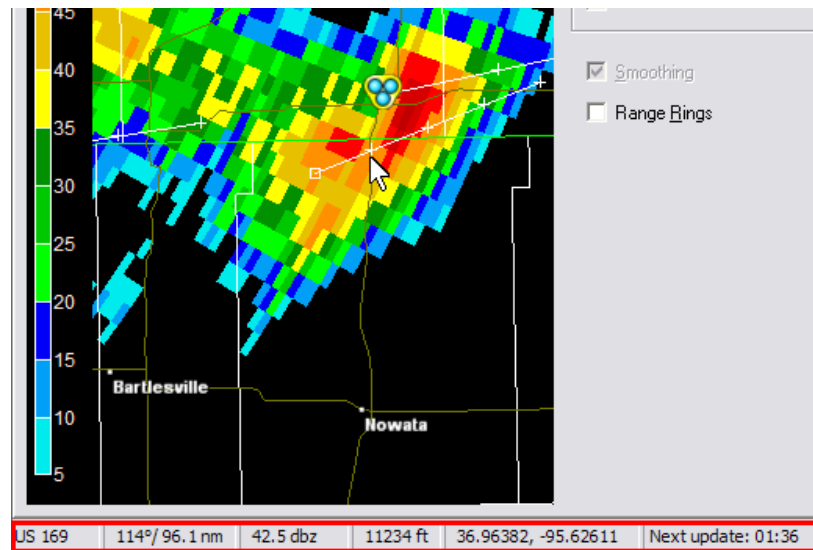
You can also adjust how these names are displayed by going to the **Settings** menu. Feel free to change these at your leisure



You can also place a marker anywhere on the radar image that will stay in that location while switching between products. This can aid in identifying various features. To place a marker or a home point, right click on the image where you would like to place a marker and then click **Place Marker Here** or **Place Home Here**. You can select options in this menu to measure either from radar, home or marker. This information will be displayed in the bottom bar of the window.



Finally, just as with GR Level 2, Level 3 has quick information available along the bottom bar of the window. These values are based upon where your cursor is currently located on the radar image.



US 169	114°/ 96.1 nm	42.5 dbz	11234 ft	36.96382, -95.62611	Next update: 01:36
Road	Azimuth / Radius	Ref. Value	Elevation	Latitude, Longitude	Time until next image