



“WEATHER RISK MANAGEMENT PROGRAM®” COMMERCIAL WEB SITE PROGRAM TUTORIAL

WEATHERBANK, INC. is pleased to announce the release of its latest web-based, custom weather service.

The service, known as *WEATHERBANK*'s “Weather Risk Management Program,” is targeted to the needs of small businesses, and is a joint undertaking between *WEATHERBANK* and Weather Decision Technologies, Inc. (“WDT”), of Norman, Oklahoma. This service will be one of a kind, in that it will offer to small businesses those weather risk tools and resources that have only been available to very large companies.

On August 22, 2003, *WEATHERBANK* began accepting subscriptions to the service through its secure, online process.

If you have comments, questions or concerns - or if you would like to subscribe over the telephone, please feel free to call us at **(405) 359-0773** or E-mail at **support@weatherbank.com**. *Also, please see the minimum Browser requirements on Page 11.*

SUBSCRIBING, LOADING , AND INITIALIZING THE PLUG-IN

STEP 1: Go to : www.weatherbank.com

STEP 2: **Left-Mouse click** the “Subscribe Online” button and complete the application form by subscribing to the “Commercial” level account (\$39.95 per month).

The screenshot shows the WEATHERBANK.COM website. At the top, the logo 'WEATHERBANK.COM' is displayed in a large, blue, serif font, with the tagline 'Your complete source for online weather solutions' underneath in a smaller, italicized font. Below this, there is a sign-in section for members. It says 'Members, sign in here:' in red. There are two input boxes: one for 'Nickname:' and one for 'Password:'. To the right of the password box is a blue button labeled 'sign in'. Below the sign-in section, there is a link for 'Not a Member?' in red, followed by 'Get More Details On PERSONAL SERVICES or COMMERCIAL SERVICES' in blue. At the bottom of the page, there is a navigation menu with links: 'Historical Weather Data | Subscribe Online | Examples | Testimonials | Site Map | Corporate Overview | Employment Opportunities | News Releases | Contact Us | Frequently Asked Questions | Feedback'. A red arrow points to the 'Subscribe Online' link. At the very bottom, there is a red banner that reads 'Summer, 2003: WEATHERBANK Releases New, Internet-based Weather Service: "The Weather Risk Management Program"'. The background of the page features a faint image of a globe.

STEP 3: After subscribing, log into the service by returning to the home page and inserting your newly-created *Nickname* and *Password* into the appropriate boxes. Then **Left-Mouse click** on the “Sign In” button or hit the <enter> key.

SUBSCRIBING, LOADING, AND INITIALIZING THE PLUG-IN, CONT.



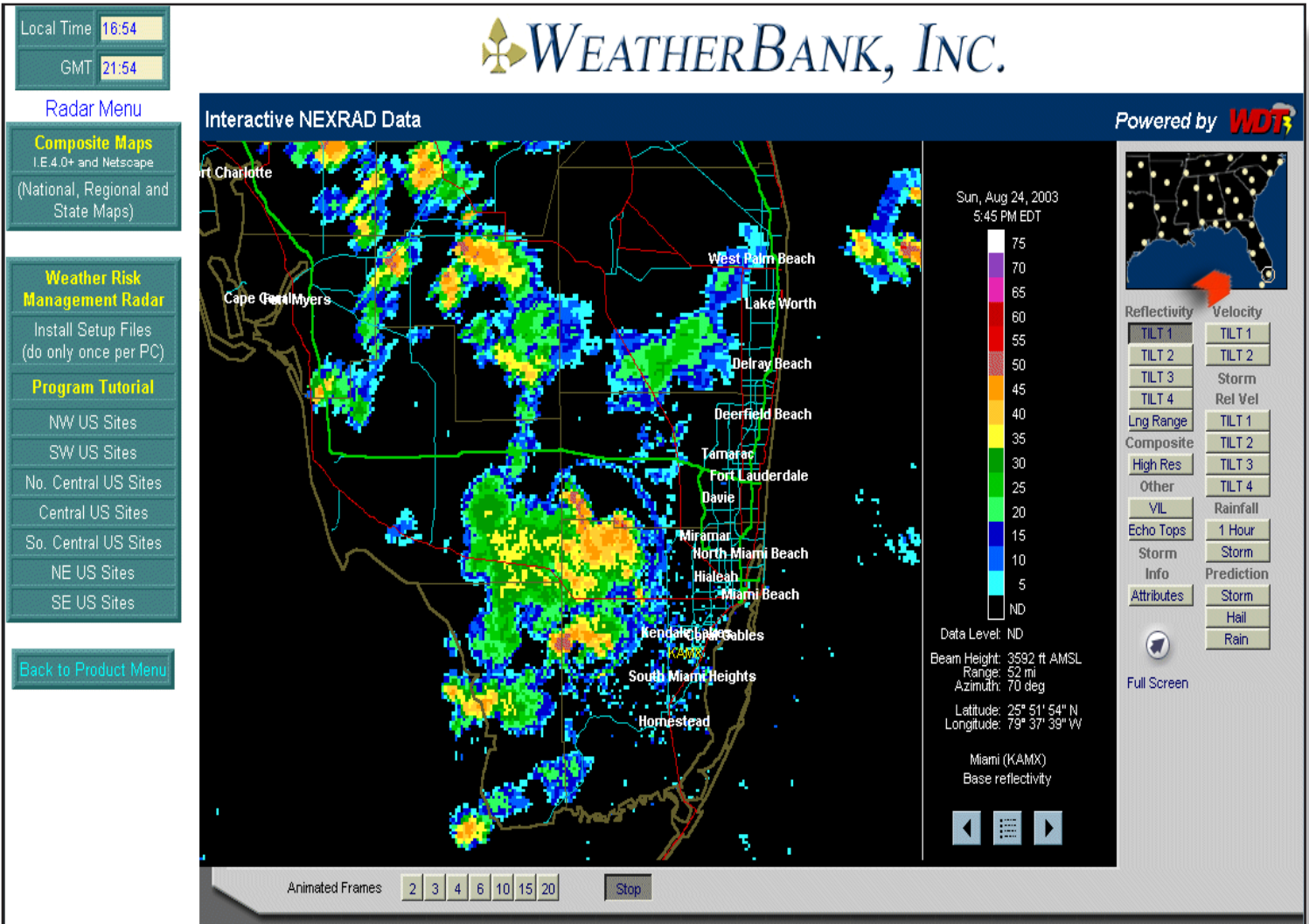
STEP 4: Once you're inside the service, the "Main Menu Page" will appear (as partially shown in the graphic, above left). This page illustrates the various product groups that are available for viewing and initially accessed from this page.

STEP 5: To access our NEXRAD Radar products, begin by **Left-Mouse clicking** on the "Radar Maps" button on the Main Menu. That will open to the next menu, shown above on the right. NEXRAD Radar displays are subdivided into two groups: our Composite Maps (top grouping) and our "Weather Risk Management" Radar maps (bottom group).

To view our "Weather Risk Management" Radar products, you must first download and install the WDT WxScope® Plug-in. To install the Plug-in, **Left-Mouse click** on the "Install Setup Files" button, as shown in the graphic, above right. Then follow the instructions presented in the download process.

Once the download and Plug-in installation process has completed, you may **Left-Mouse click** on any region to view.

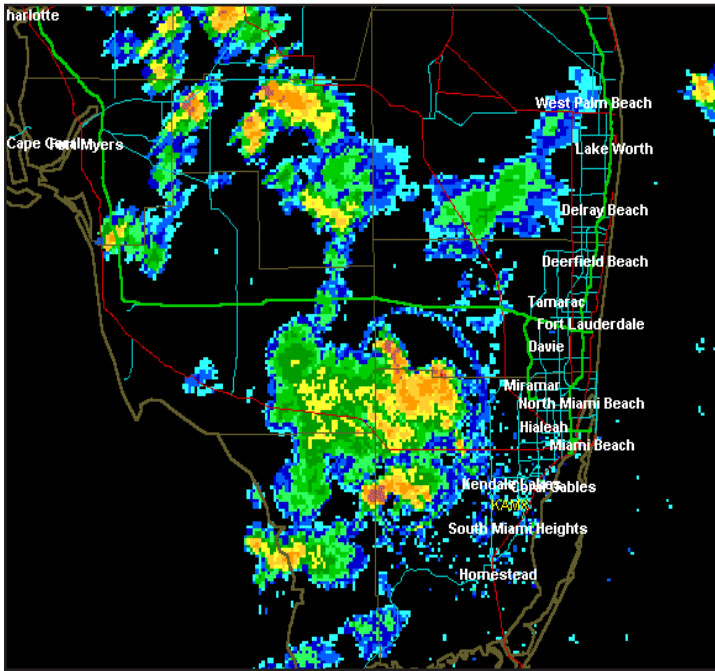
ACCESSING AND VIEWING NEXRAD PRODUCTS



For example, having clicked on the Southeast Region, a graphic similar to the one shown above will appear. You can then choose to view any Radar site in this region by **Left-Mouse clicking** on the appropriate site location from the map in the upper right-hand corner of the display. In this example, the Miami (KAMX) was brought to view.

The displays are automatically refreshed with new data as it becomes available (approximately, every six (6) minutes).

FUNCTIONALITY OF THE NEXRAD MAP DISPLAYS



The Radar displays have a high degree of functionality, including:

ZOOM IN

Use a **Left-Mouse click** on the map to zoom-in on a portion of the display. This can be done repeatedly to view a smaller geographical area. As a smaller area is displayed, a greater amount of demographic information may be displayed, depending upon the specific area.

ZOOM OUT

Use a **Right-Mouse click** on the map to zoom-out from a portion of the display. This can be done repeatedly to view a larger geographical area. As a larger area is displayed, less demographic information may be displayed, depending upon the area.

PANNING THE DISPLAY

Use an **<Alt> Left-Mouse click with drag** to pan the image of any display.

ZOOMING INTO A SELECTED AREA OF A DISPLAY

Use a **<Shift> Left-Mouse click with drag** to highlight certain portion of any display to zoom into.

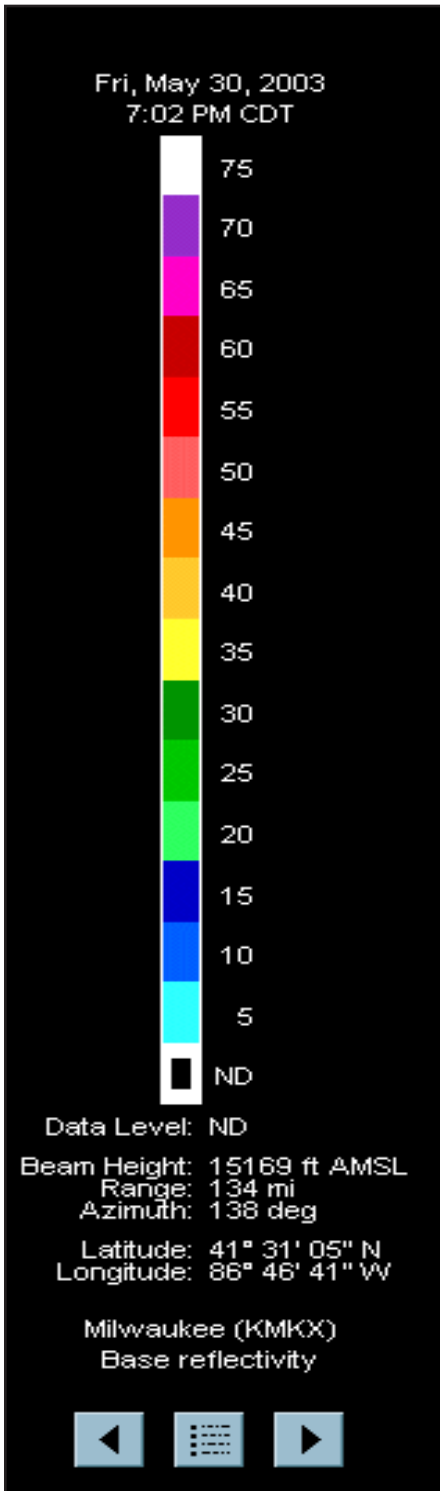
THE KEYS AND MENUS ~ ANIMATION MENU (Bottom Menu on the Main Display)



When a Radar graphic is displayed, the most current, static image is brought into view.

At the bottom of the main display is the Animation Menu. A **Left-Mouse click** on any one of the seven (7) numbered buttons will cause the display to animate with the number of frames chosen (each frame covers approximately 6 minutes). As the display animates, the time for each image is displayed at the top of the NEXRAD Data Menu - just below the current date (see NEXRAD Data Menu, next page). The animation sequence will continue to operate until the **“Stop”** button is activated by a **Left-Mouse click**. In doing so, the most recent static image will then be displayed.

THE KEYS AND MENUS ~ NEXRAD DATA MENU (Center Menu on the Main Display)



The NEXRAD Data Menu is found in the right-center area of the main display (as shown to the left). NEXRAD Radar Data is displayed in db levels and indicated in colors. Higher db readings indicate stronger returns and, therefore, greater precipitation.

A **Left-** or **Right-Mouse click** on any color code on the Menu Bar will cause that return level to be removed from the display. A **Left-** or **Right-Mouse click** on the removed color code will return that level back into the display.

NOTE: By removing lower level returns, you may be able to remove ground clutter and anomalous propagation. This will allow you to more easily see, and concentrate on, the main or heaviest areas of precipitation.

As you move your mouse over the NEXRAD display where precipitation is indicated, that db level on the Menu Bar will be highlighted to indicate the level. A mouse movement over an area without precipitation will be highlighted as “ND” on the Menu Bar. Also, when moving your mouse over the display, the NEXRAD return reading is indicated at the bottom of the Menu Bar, as “Data Level.”

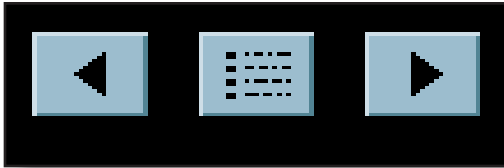
In “**Precipitation Mode**,” or **VCP 21** (or **VCP 11**), the scale ranges from No Data (“ND”) to 75 db, in 5 db increments.

In “**Clear Air Mode**,” or **VCP 32**, the scale ranges from ND, then from -28, through “0” to +28, in 4 db increments.

Below the Data Level indicator is more useful information. When moving your mouse over the display, you will notice that the Beam Height (in feet above mean sea level), Range (in miles), Azimuth (compass direction, degrees), Latitude, and Longitude (degrees, minutes and seconds) will all change. All of these parameters are relative to the NEXRAD Radar site location and the current position of your mouse on the display. **NOTE:** This information would be useful in ascertaining the location of severe weather relative to your points of interest or asset locations.

Also listed in this group of data is the NEXRAD site city location and four-letter code (Milwaukee and KMKX in the example at left), and the NEXRAD parameter being viewed (Base reflectivity in the example at left).

THE KEYS AND MENUS ~ NEXRAD DATA MENU (Center Menu on the Main Display), CONT.



The three buttons at the bottom of the NEXRAD Data Menu (shown to the left) will display the key to the map overlays shown on the displays.

NOTE: The “Left” and “Right” arrow buttons will cycle through the available symbols and overlays. It is preferred to **Left-Mouse click** on the center button, indicating the “Key” to the displays. In doing so, the map Key will appear, as shown in the example, below-left.

Fri, Aug. 22, 2003
7:22 PM CDT

ID NEXRAD Stations

Aa Wisconsin Major Cities

Aa Wisconsin Minor Cities

 Interstates

 U. S. Highways

 State Highways

 County Outlines

 State Borders

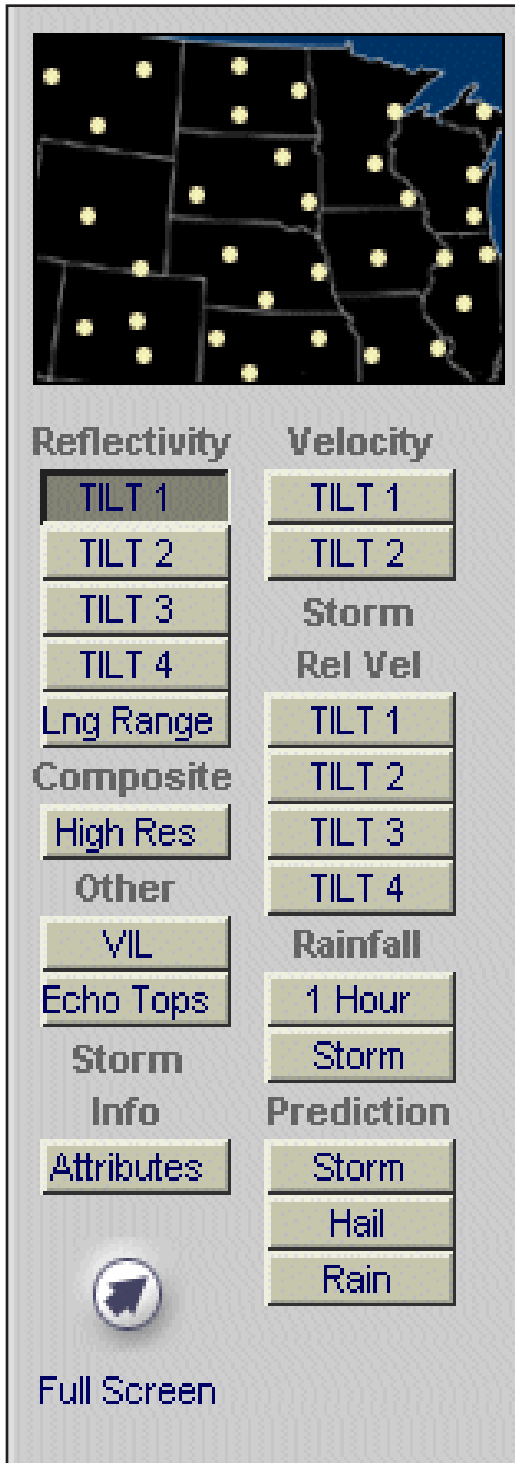
 KMKX BREF

Map overlays include the NEXRAD Station ID (shown as its four-letter code in **YELLOW**), major and minor cities (shown in **WHITE**), U. S. Interstates (shown in **GREEN**), U. S. Highways (shown in **RED**), State Highways (shown in **BLUE**), county outlines (shown as thin **BROWN** lines), and State borders (shown as thick **BROWN** lines).

A **Right-Mouse click** on any overlay parameter in the Key will cause it to be removed from the display. A second **Right-Mouse click** will add the overlay parameter to re-appear on the display.

A **Right-Mouse click** on the NEXRAD station icon (on the bottom of this Key) will cause ALL Radar data to be removed from the display. A second **Right-Mouse click** on the NEXRAD station icon will add ALL Radar data back to the display. A **Left-Mouse click** on the NEXRAD station icon will bring back the original, NEXRAD Data Menu.

THE KEYS AND MENUS ~ NEXRAD PRODUCT MENU (Left on the Main Display)



The NEXRAD Product Menu is found in the right area of the main display (shown at the left). This is the menu where you can choose the various NEXRAD products, as described below. A **Left-Mouse click** on any parameter will activate that product display. Once chosen, the activated button will turn **BROWN** from tan (as shown at left with the Tilt 1, of the Base Reflectivity Product).

PRODUCT DESCRIPTIONS

BASE REFLECTIVITY : 4 Tilt Angles

Tilt 1: 0.5 degree angle of tilt

Tilt 2: 1.5 degree angle of Tilt

Tilt 3: 2.5 degree angle of Tilt

Tilt 4: 3.4 degree angle of Tilt

LONG RANGE : Uses a 0.5 degree angle of Tilt and may show data beyond the Tilt 1 view.

COMPOSITE - HIGH RES : Shows 2 km Radar data.

OTHER - VIL : Shows a display of Vertically Integrated Liquid, in Kg/m²

OTHER - ECHO TOPS : Shows a display of estimated storm heights, in thousands of feet above the surface.

STORM INFO - ATTRIBUTES : Activating this button will provide a variety of Storm Attributes over the top of the Radar display. Please see Page 10 for a review of this application.

FULL SCREEN BUTTON : A **Left-Mouse click** on this button will open a new window, which will display that portion of the web page that has a black background (normally the display and the NEXRAD Radar Menu). The Full Screen display will work with any of the NEXRAD Products, and in either static or animation mode. To close out a Full Screen display, just **Left-Mouse click** on the “close button” for the window.

Radial VELOCITY : 2 Tilt Angles

Tilt 1: 0.5 degree angle of tilt / Tilt 2: 1.5 degree angle of Tilt

NOTE: See Page 8 for a discussion on Velocity.

STORM RELATIVE VELOCITY : 4 Tilt Angles

Tilt 1: 0.5 degree angle of tilt

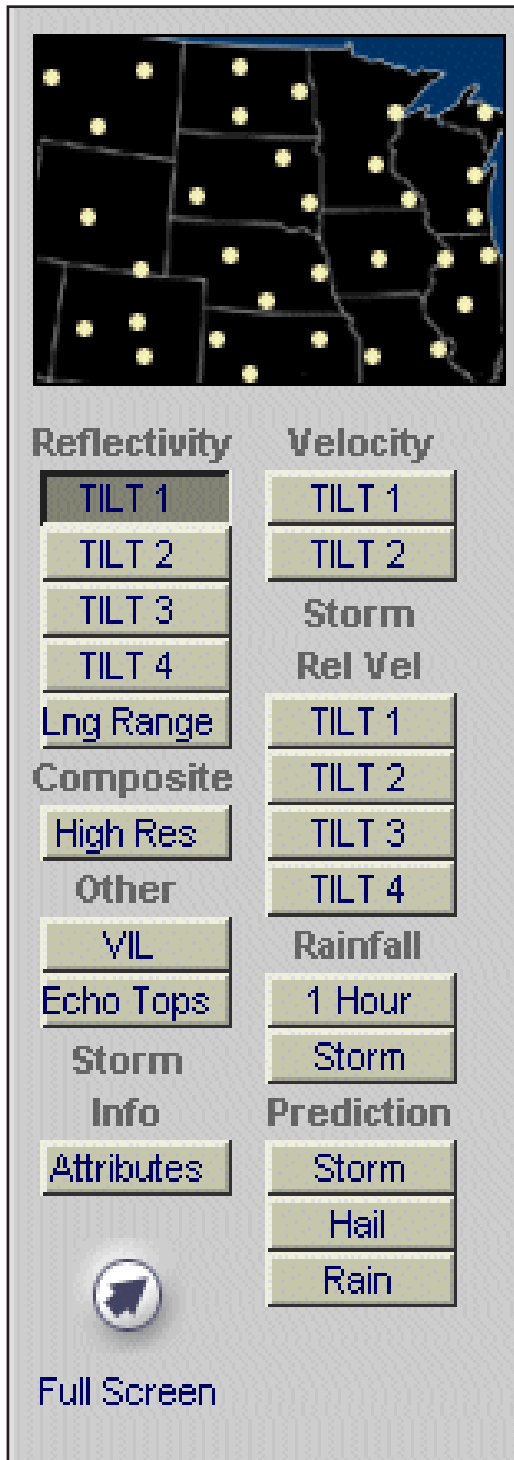
Tilt 2: 1.5 degree angle of Tilt

Tilt 3: 2.5 degree angle of Tilt

Tilt 4: 3.4 degree angle of Tilt

NOTE: See Page 8 for a discussion on Storm Relative Velocity.

THE KEYS AND MENUS ~ NEXRAD PRODUCT MENU (Left on the Main Display), CONT.



NOTE: Velocity, or Base Radial Velocity, is the measure of air motion toward or away from the radar site. This is not actual air motion, but the component moving along a radial. A velocity of zero does not necessarily mean the air is calm. With practice, this product can yield useful information about low and mid-level windflow as well as storm structure and the potential for severe weather.

This parameter is used to estimate environmental winds and locate boundaries and regions of significant shear such as meso-cyclones and downbursts. It is updated every 5, 6, or 10 minutes depending on scanning strategy, and the data are available to a range of 124 nautical miles every volume scan for 0.5 and 1.5 degrees of tilt. Fifteen data levels are used ranging from -64 to +64 knots where negative velocities represent inbound motion [towards the radar] and positive velocities indicate outbound motion [away from the radar].

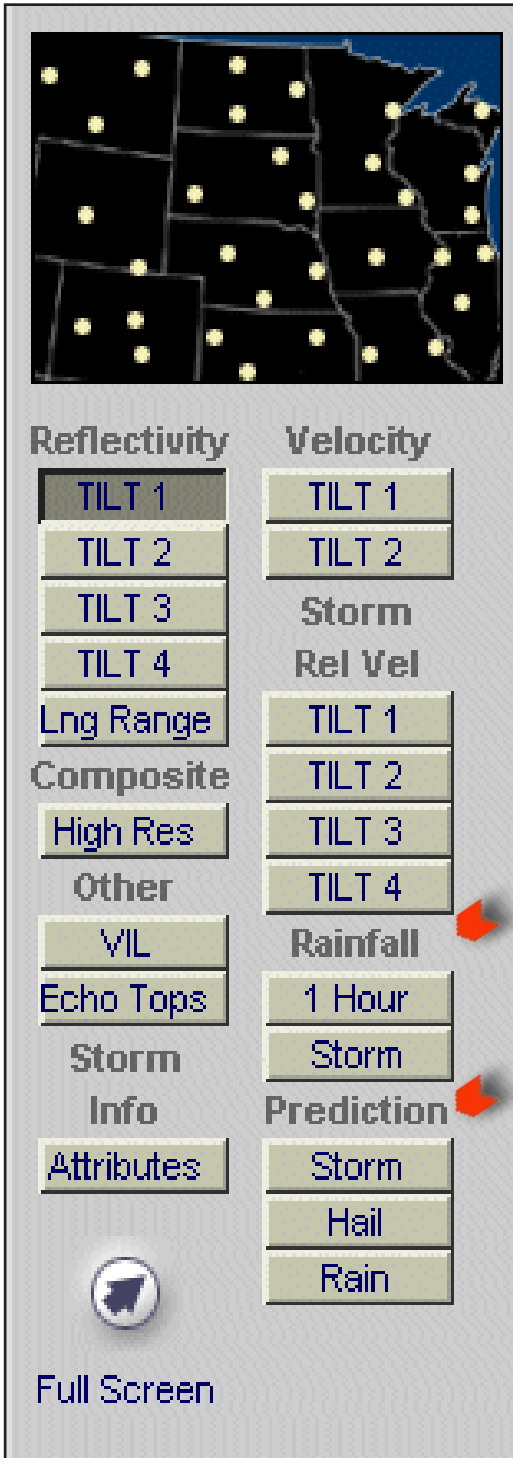
NOTE: Storm Relative Velocity, or Storm Relative Mean Velocity, is a derived product that subtracts the mean storm motion from the wind field. It allows for the presentation of storm scale motions and circulations to be seen with much greater clarity than Velocity.

Images are updated every 5, 6, or 10 minutes depending on the scan strategy. Data are available to a range of the 124 nautical miles each volume scan for tilt angles of 0.5, 1.5, 2.4, and 3.4 degrees. Fifteen data levels are used ranging from -50 to +50 knots, where negative velocities represent inbound motion (towards the radar) and positive velocities reflect outbound motion (away from the radar).

As is the case with Velocity, Storm Relative Velocity is only a measure of the component of air motion that is toward or away from the radar. The image does not represent a total wind portrait unless the wind is blowing directly along a given radial. Input for the Storm Relative Velocity product includes the Velocity data and either a storm motion value computed for an identified storm or vector average of identified storm motion. A storm motion vector can also be manually input at the Radar site. The storm motion is subtracted from (or added to) the Velocity, resulting in a wind display that now becomes relative to the storm, instead of relative to the ground. This allows windflow within a storm to show up with greater clarity.

The Storm Relative Velocity image is an aid for identification of storm rotation, especially when rotational signatures are obscured in Velocity images by storm motion. Meso-cyclones and Tornado Vortex signatures typically will show up much better in the Storm Relative Velocity wind field, especially when storm motion is nearly parallel to the radial.

THE KEYS AND MENUS ~ NEXRAD PRODUCT MENU (Left on the Main Display), CONT.



RAINFALL : Available in two (2) Time slices:

1 Hour - Total rainfall indicated from NEXRAD data during the last 60 minutes.

Storm - Storm Total Precipitation is available from the first volume scan when precipitation is detected and until one hour after the precipitation stops, giving the total storm system precipitation.

The processor continues to calculate accumulation as long as there are echoes within the range of 124 nautical miles from the Radar site, which defines a “storm event.” Afterwards, the accumulation routine then resets the total to “zero.”

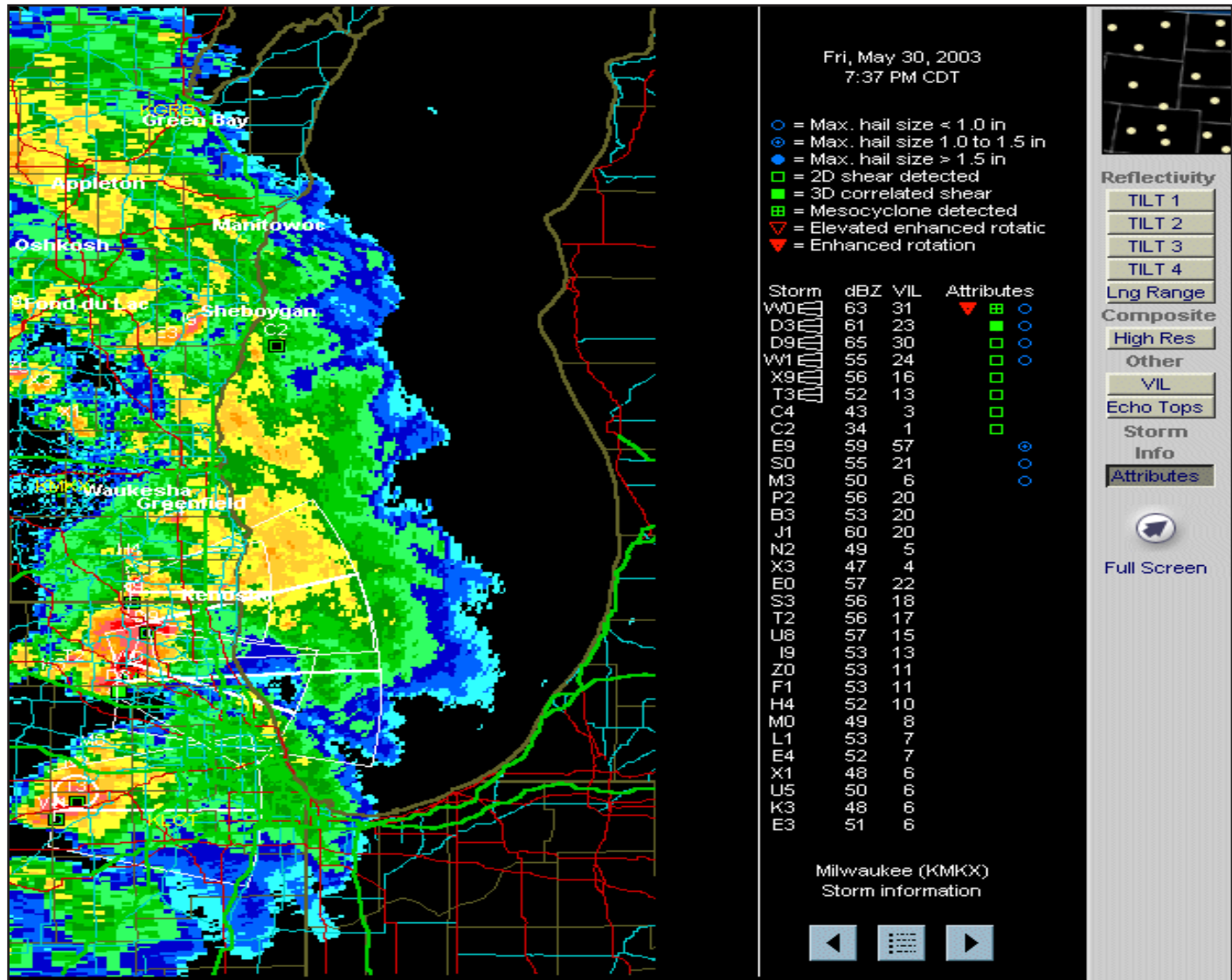
PREDICTION : Available in three (3) Applications

Storm : Storm Predictor™ forecasts the movement and evolution of storms and radar echoes for 30 minutes into the future, This forecast is provided in increments of approximately 6 minutes. With each estimated display, the time of the prediction is presented at the top of the NEXRAD Data Menu.

Hail : Hail Predictor™ predicts the areal extent of hail 30 minutes in advance and will differentiate between hail less than 3/4 inch, 3/4 inch to 1-3/4 inch, and 2 inches and greater in diameter.

Rain : Rain Predictor™ forecasts rainfall accumulation, in inches, for the next 60 minutes.

THE KEYS AND MENUS ~ NEXRAD PRODUCT MENU (Left on the Main Display) THE ATTRIBUTES BUTTON



NEXRAD PRODUCT MENU

Having **Left-Mouse clicked** on the Storm Info - Attributes button, a display similar to the one above will appear for your selected Radar display.

In this case, all major storm cells will be identified with an alphanumeric code (for example, “D3”). To the right of each named cell will be its respective db level reading, the Vertically Integrated Liquid (“VIL”) value (in Kg/m²), and any applicable storm attributes. The storm attributes will be shown as colored symbols, which are identified in the Attributes Key.

By **Left-Mouse clicking** on any storm parameter (cell alphanumeric code, db level, VIL value, or storm attribute) a directional vector polygon or a circular highlight will appear over the respective storm cell. **Left-Mouse clicking** on any storm parameter again, will remove the attribute overlay.

BROWSER REQUIREMENTS & SETTINGS

Minimum Browser Versions: Microsoft Internet Explorer, version 5.0 and higher
 Netscape Communicator, version 4.7 and higher

- A. For Microsoft Internet Explorer Users:
- STEP 1: Open browser;
 - STEP 2: *Click on* “Tools” from the menu bar at the top of the browser;
 - STEP 3: *Click on* “Internet Options;”
 - STEP 4: *Click on* the “General” tab;
 - STEP 5: Halfway down, under “Temporary Internet Files,” *Click on* the “Settings” tab;
 - STEP 6: *Click* the box for “Every Visit to the Page;” and
 - STEP 7: Save these changes, close out Explorer, and re-start your PC.
- B. For Microsoft Internet Explorer Users on a PC (Not a MAC):
- STEP 1: Open browser;
 - STEP 2: *Click on* “Tools” from the menu bar at the top of the browser;
 - STEP 3: *Click on* “Internet Options;”
 - STEP 4: *Click on* the “Advanced” tab; and
 - STEP 5: Under the “Cookies” header, select “Always Accept.”

CUSTOMER SERVICE ~ TECHNICAL HELP

Please call us at **(405) 359-0773** or E-mail us at **support@weatherbank.com**

*Thank You
For Your Support*