



FOR THE NEXT GENERATION NAVY
NOWCAST

NOWCAST

Users Guide

V1.1

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NOWCAST USER'S GUIDE

This document provides brief and essential information on how to use the Nowcast Graphical User Interface (GUI). The GUI is a Java Application that is downloaded from the Nowcast web server via a Java Web Start enabled browser. The Java Web Start technology is a component of the Java SDK or JRE version 1.4.x, which is required to run Nowcast. After loading the Nowcast GUI twice from the Uniform Resource Locator (URL), an icon will be displayed on the users desktop. This icon can be used (double-clicked) to access the Nowcast GUI. Each time the Nowcast GUI is loaded, Java Web Start will check with the Nowcast server to see if updated code needs to be downloaded. If it does Java Web Start will download and install it for you. This users manual is available from the Nowcast GUI via the help menu option.

Logging In

First, log into the Nowcast system with a valid user name and password (Fig.1). If it is a valid login, the Nowcast login GUI will be replaced with a new window that loads the users default folder. Invalid logins will result in an error message.

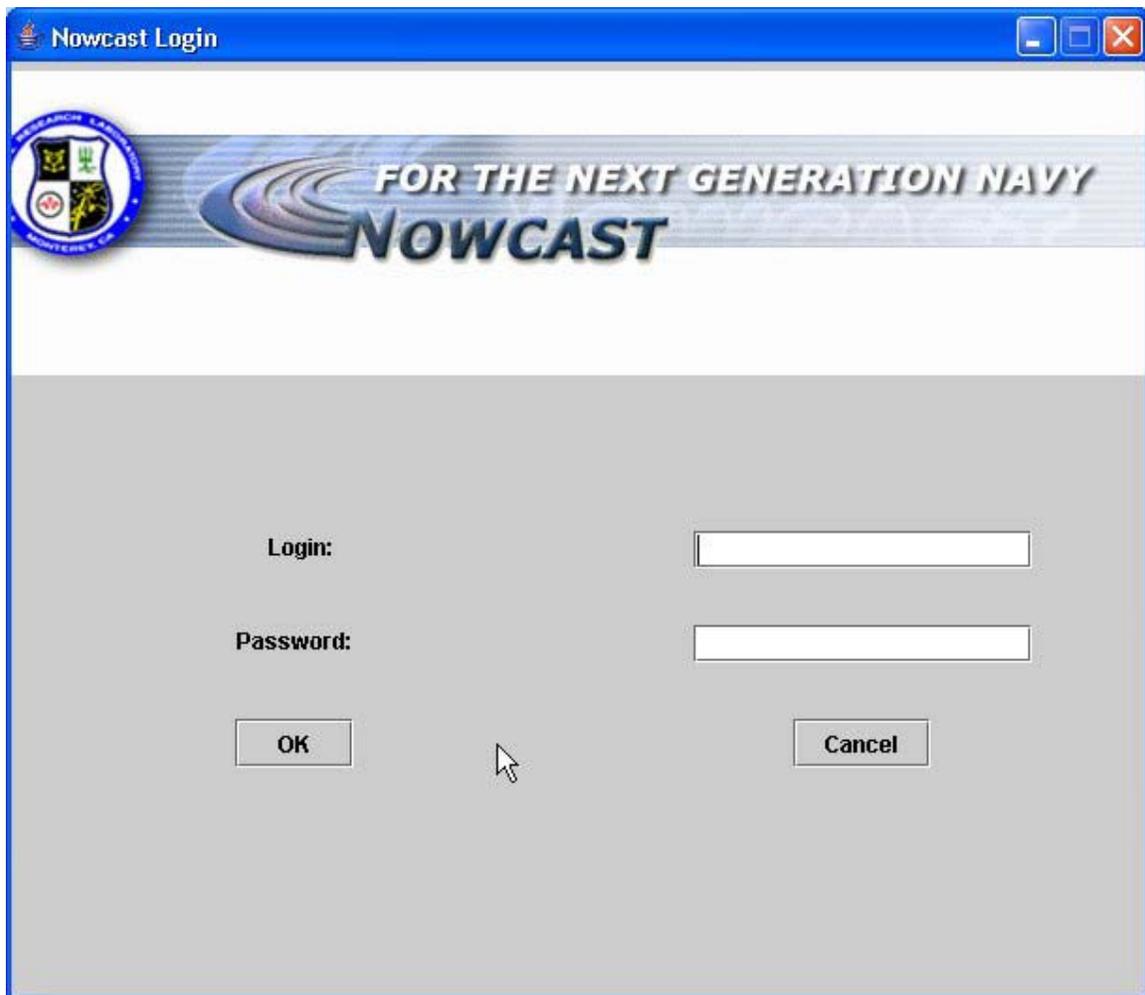
The image shows a screenshot of a Java application window titled "Nowcast Login". The window has a blue title bar with standard Windows-style window controls (minimize, maximize, close) on the right. The main content area features a header with a circular logo on the left and the text "FOR THE NEXT GENERATION NAVY" and "NOWCAST" in a stylized font. Below the header, there are two input fields: one labeled "Login:" and one labeled "Password:". At the bottom of the window, there are two buttons: "OK" and "Cancel". A mouse cursor is visible over the "OK" button.

Fig. 1

Nowcast incorporates the concept of folders, tabs, products, and data for display and organization by the end user. A folder is a collection of up to five tabs where each tab consists of up to two graphical products, a background map and geographic overlays, a data layer, and optional wind profiles. Nowcast is designed so the user can organize graphical products and data on maps (tabs) and store the tabs within user specific folders for easy retrieval. After successful authentication, the Nowcast GUI is launched loading the users default folder (Fig. 2).

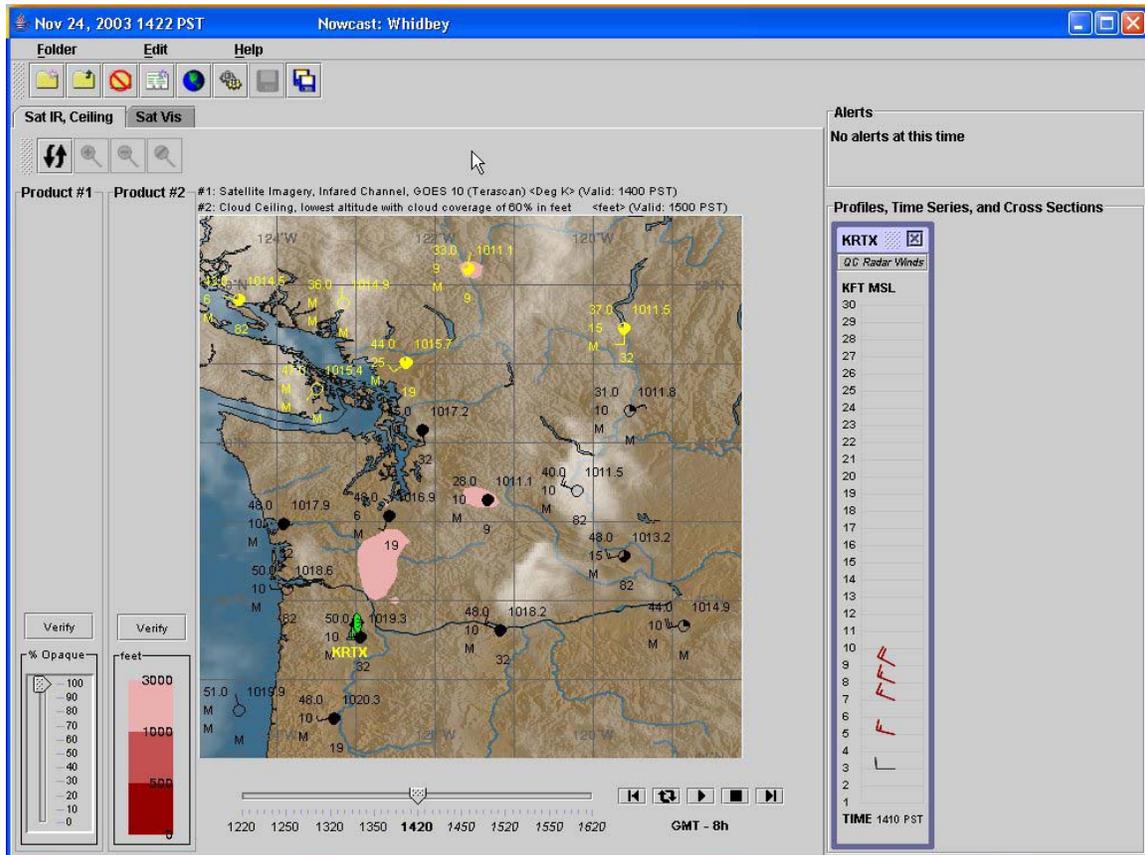


Fig. 2

Loading a Folder

To load an existing folder, click on the Folder heading on the main menu bar and scroll down and click on Open (Folder -> Open). An Open Folder dialog box will pop up showing three categories: User, METOC, and Shared. Double clicking on either category will expand the list. User folders are specific to the logged in user and are not shared. METOC folders are created by the METOC operator and shared among all users. Shared folders are for future consideration when a user can share out their folders. Click on the name of the folder to highlight it and then click OK to close the current folder and open the requested folder. Loading a folder consists primarily of loading the associated tabs. The tabs are loaded using background processing with the following steps:

- 1) Folder definition downloaded from the server
- 2) Geographic overlays downloaded from the server and displayed
- 3) Products downloaded from the server and displayed
- 4) Data objects (Metars, lightning) downloaded from the server and displayed
- 5) Radar Wind Profiles downloaded from the server and displayed

The time taken to load the folder depends on the number of tabs (a maximum of five) in the folder and the number of products (0, 1, or 2) in each tab. Furthermore, at the time of loading, data and images are fetched for a pre-defined Nowcast historical time period (typically two hours in the past). Some products also have forecast data associated with them and those products are fetched for up to two hours in the future. Accessing the server and downloading the products and data may take a few moments. As the products download, the descriptive heading changes color and, when completed, the visible tab should start animating. The user can change this default behavior using the settings option under (Edit -> Settings) (Fig. 3).

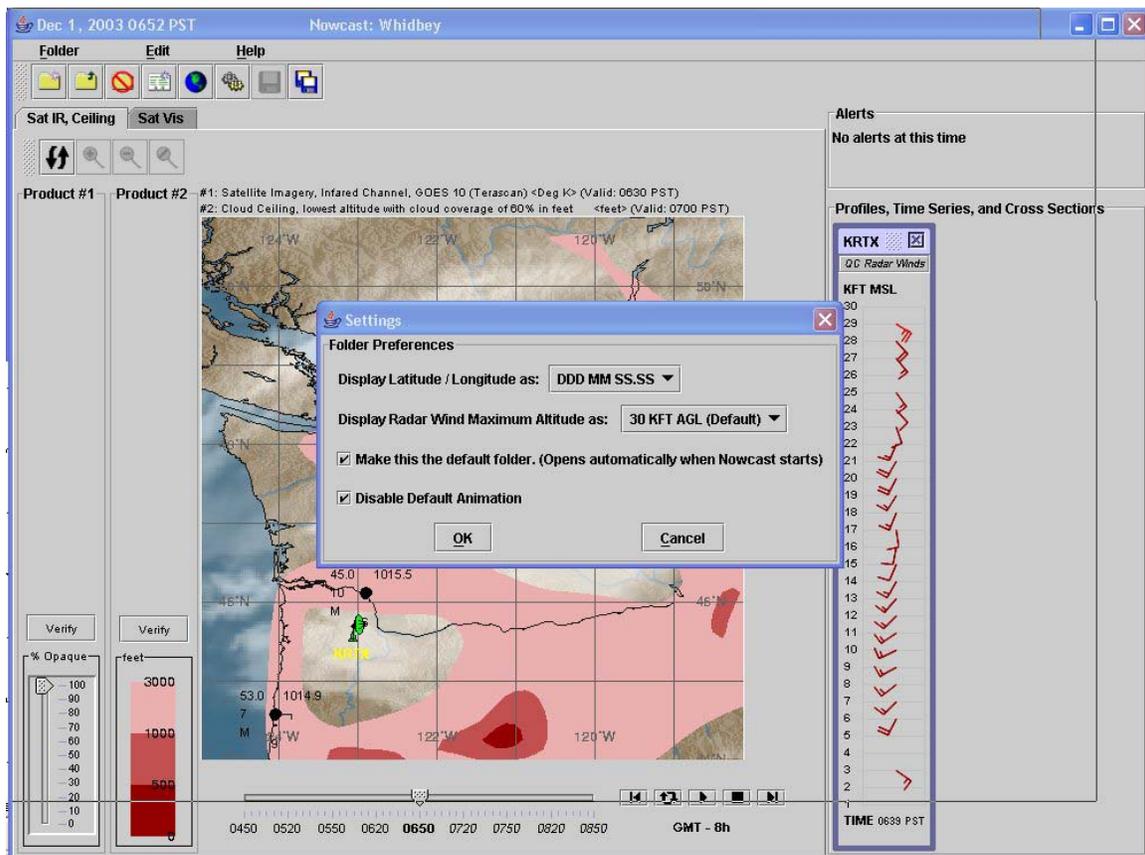


Fig. 3

Auto-Update

Subsequent to the loading of the folder, the products and data are updated every five minutes automatically without any need for user intervention. This is the default behavior at this point in the Nowcast system development. In the future, enhancements will be made so that the end user will be able to turn off Auto-Updating and instead use the

“Update Now” feature to request the most current data. The Update Now feature may be useful in the future for slow or unreliable network connections.

Animation

The images and data in a tab may be viewed as an animation. A slider bar and VCR-type controls are provided on the GUI to move to the first image, loop, play, stop, reset, and move to the last image. It is also possible to move the slider bar knob to a particular location to view the images and data at that point in time. Animation is a useful feature that may be shutdown or restarted instead of leaving a tab continually animating. A settings option (Edit -> Settings) from the main menu bar provides the ability to enable or disable default animation (Fig. 3). Auto-Update continues to function regardless of whether the products are being animated or not.

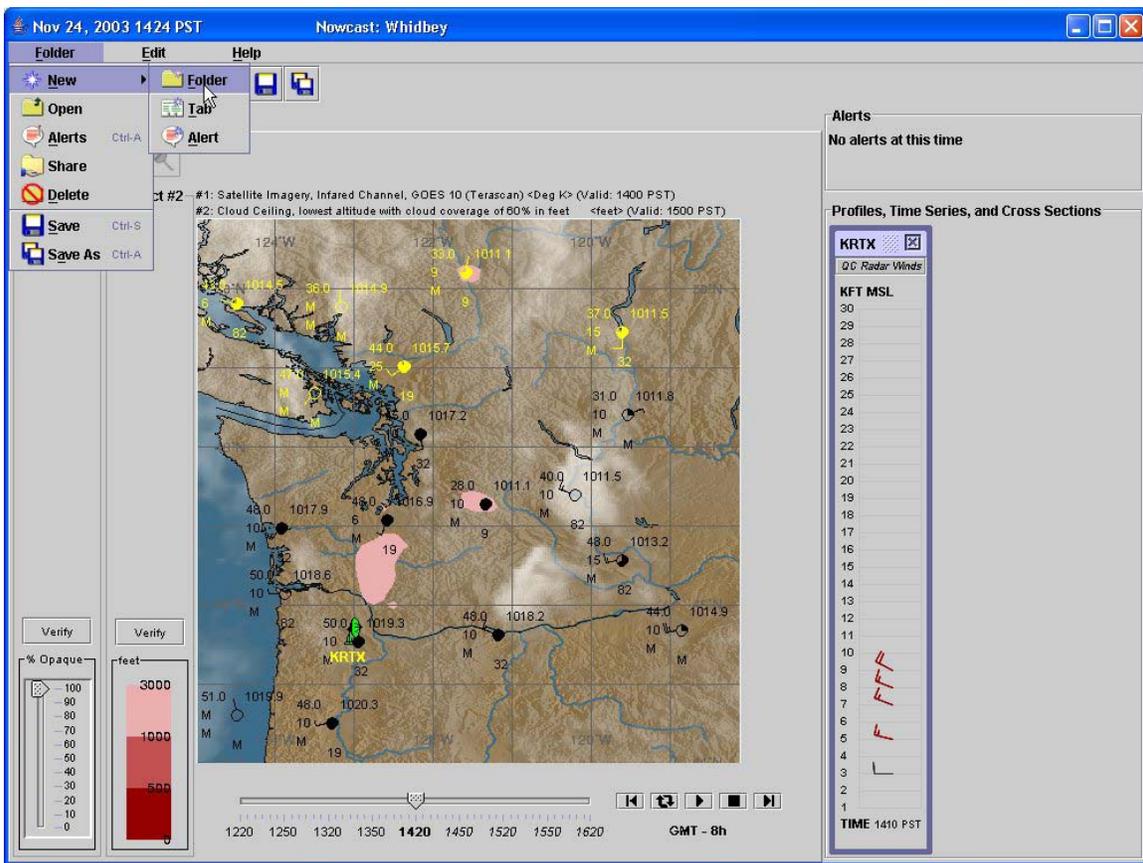


Fig. 4

Default Folder Setting

Another important settings option under (Edit -> Settings) from the main menu bar is making a folder the default folder (Fig. 3). This folder will then be the first folder loaded for the user upon their valid login.

Creating a New Folder with a Tab (Folder -> New -> Folder)

A new folder may be created (Folder -> New -> Folder) from the main menu bar and it must have at least one tab (Fig. 4). Central to the definition of a tab is the map region

associated with it. The tab's map region must be defined at the time of tab creation but the region component can be changed at a later time. At this time, a New Folder dialog is presented to the user (Fig. 5) that requires text to be entered for name, description and has options for how the tab region may be obtained.

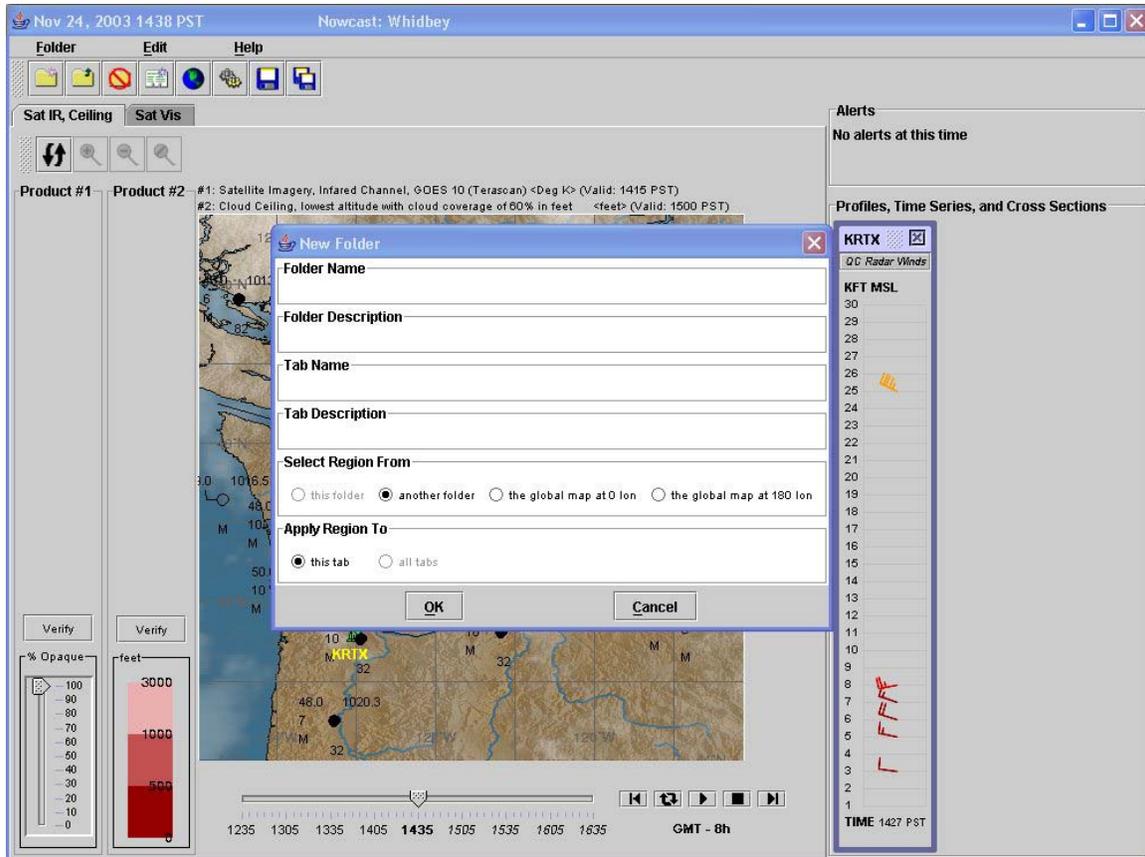


Fig. 5

A region may be imported from another existing tab contained in the current folder, or from a tab in another folder, or created from a global map. If the user selects importing a region from an existing tab, another pop up menu is presented which lets the user select another tab region of choice. If the user opts to create a new region from “the global map at 0 or 180 lon” the user is presented with a global map dialog (Fig. 13). The user then proceeds to zoom into the global map to create a region of choice and then clicks on “Submit” to cause the selected region to be inserted into the new tab.

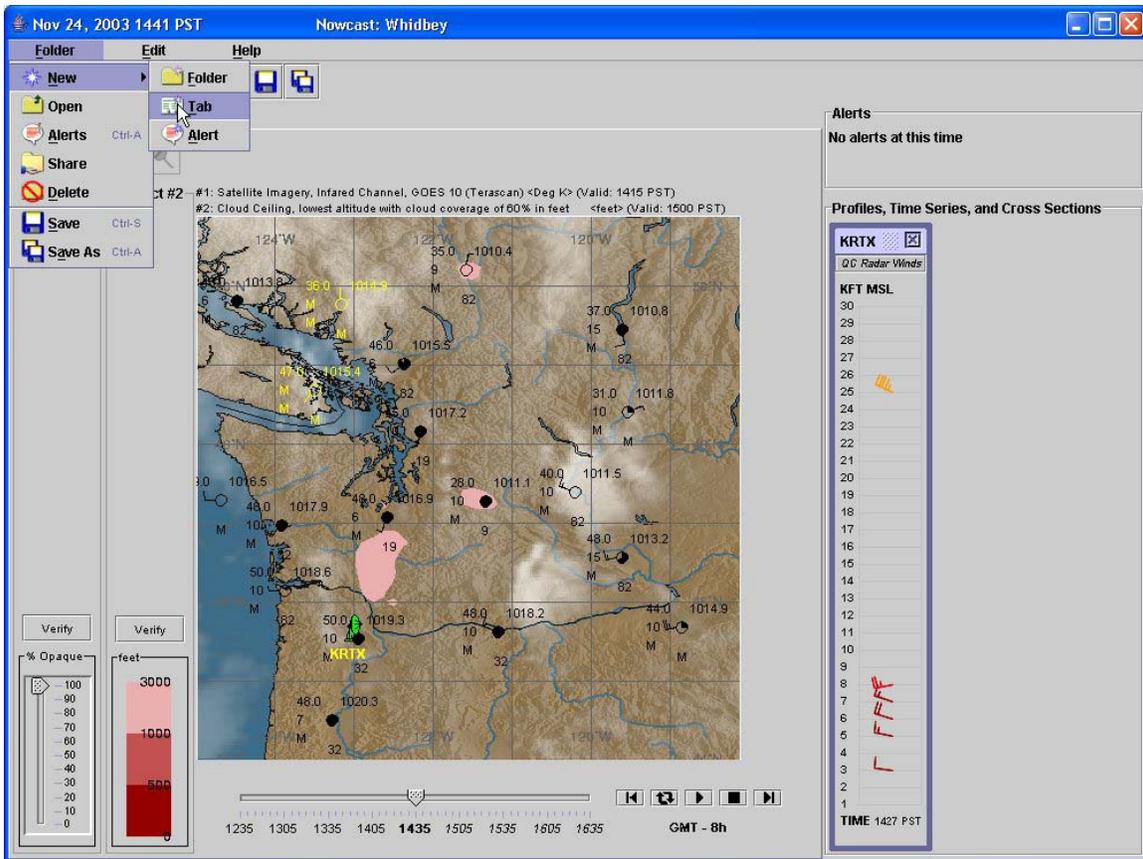


Fig. 6

At any time, when a user is editing the region in a tab or is selecting a region for a new tab (Folder -> New -> Tab) from the main menu bar as shown in (Fig. 6), an option is available which applies the selected region to all the tabs in the current folder or to just the current tab. This is merely a convenience option. (Fig. 7) Illustrates the dialog that is displayed at this time to create a new tab within an existing folder.

When a tab is created, the user may select the product(s) for the tab, or they may be selected and altered at a later time. The user may also change the region or selected product(s) in a tab at any time. In order to select products for a tab to change the existing products, the user must right click on the product pane (Fig. 8) which displays a set of options, including those that let the user change the current units for a product. If the user decides to change the current units for a product in a tab, an option is also available to apply this change globally to all the folders owned by the user.

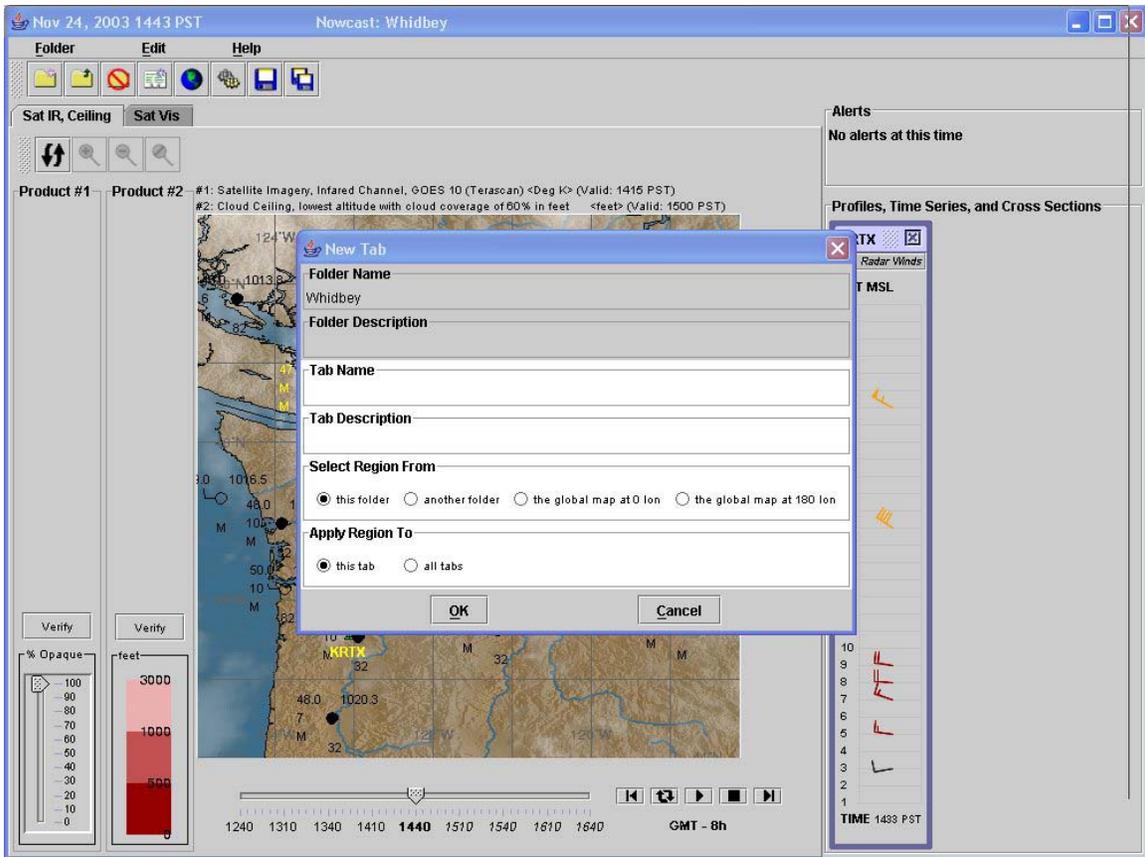


Fig. 7

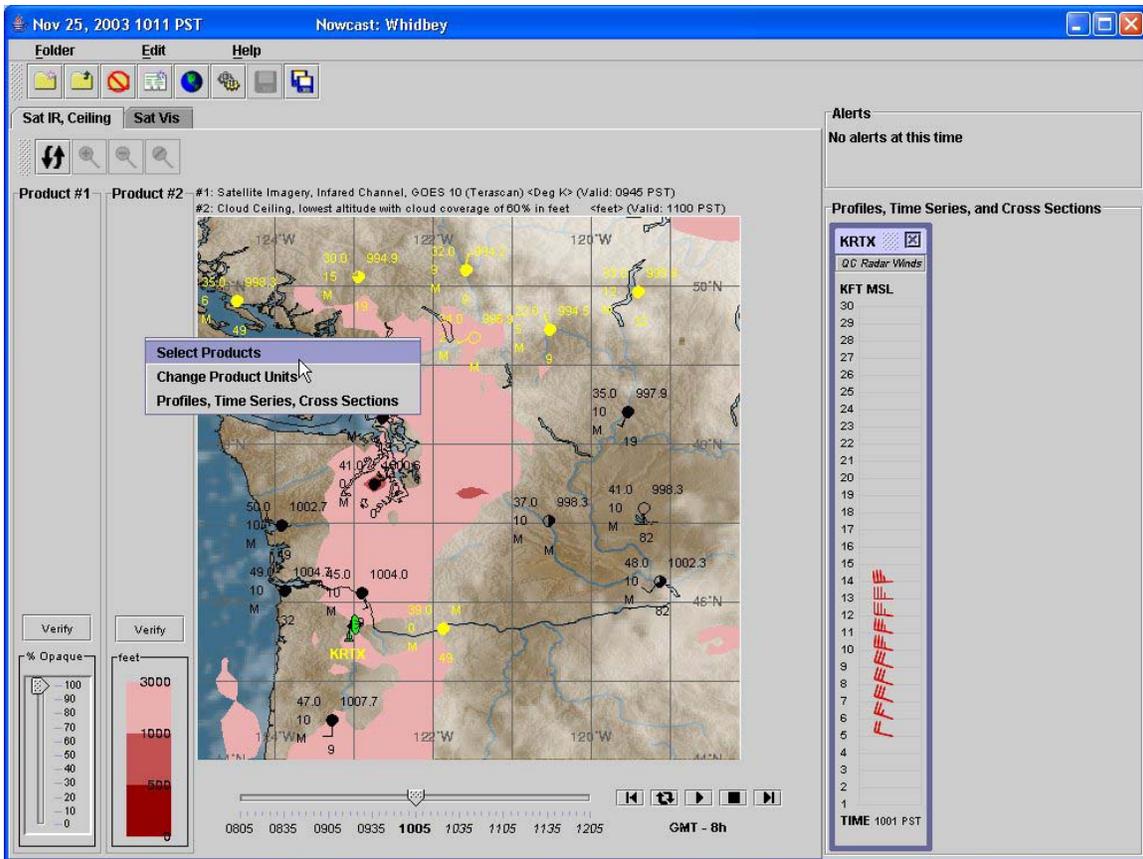


Fig. 8

Editing the Region in a Tab

A user may zoom a number of times into a tab region (Fig. 9) by “roping off” an area on the image map. To do this, simply hold down and drag the left mouse button and then clicking the “plus” (+) magnifying glass icon on the tab’s tool bar. A zoom in action causes the new region images to be retrieved from the server and displayed in the tab. The user may also zoom out of the zoomed region to the original region image of the tab (Fig. 10) using the “minus” magnifying glass icon. Similarly, it is possible to zoom out to the original region image in one step (Fig. 11) by clicking on the “slash” magnifying glass icon.

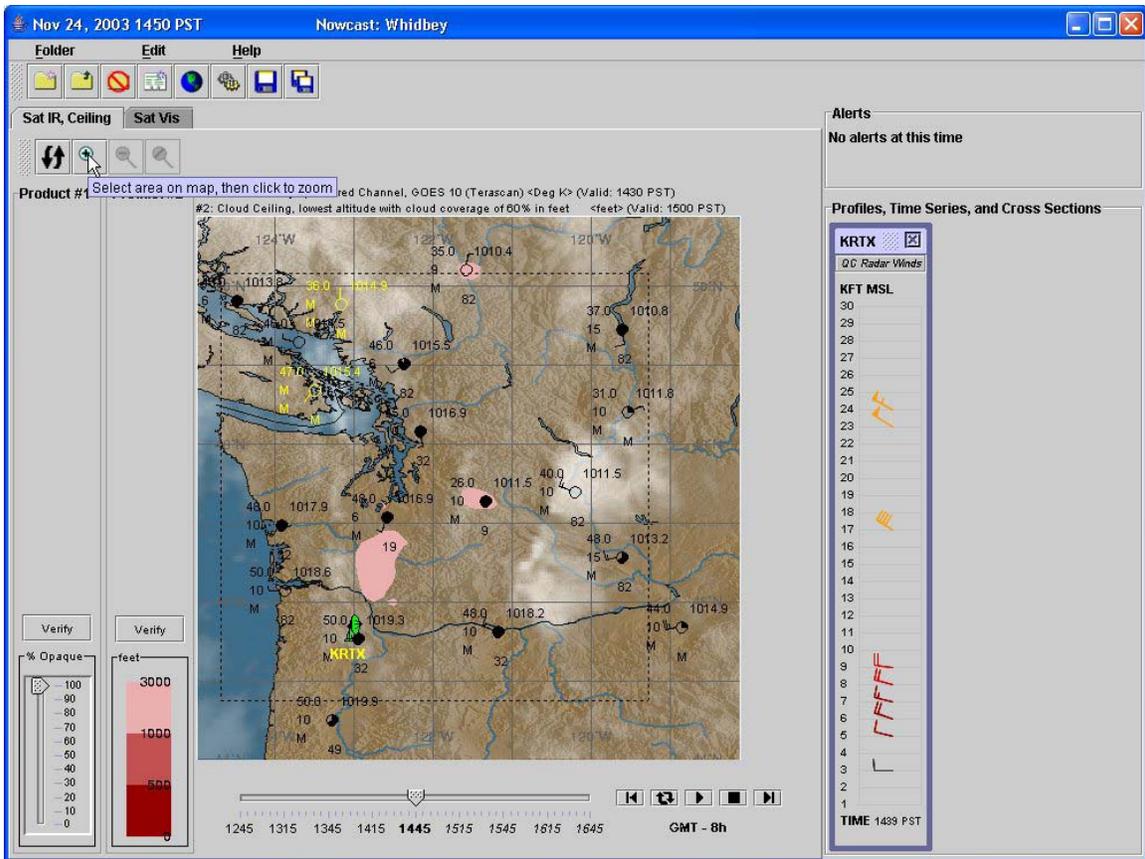


Fig. 9

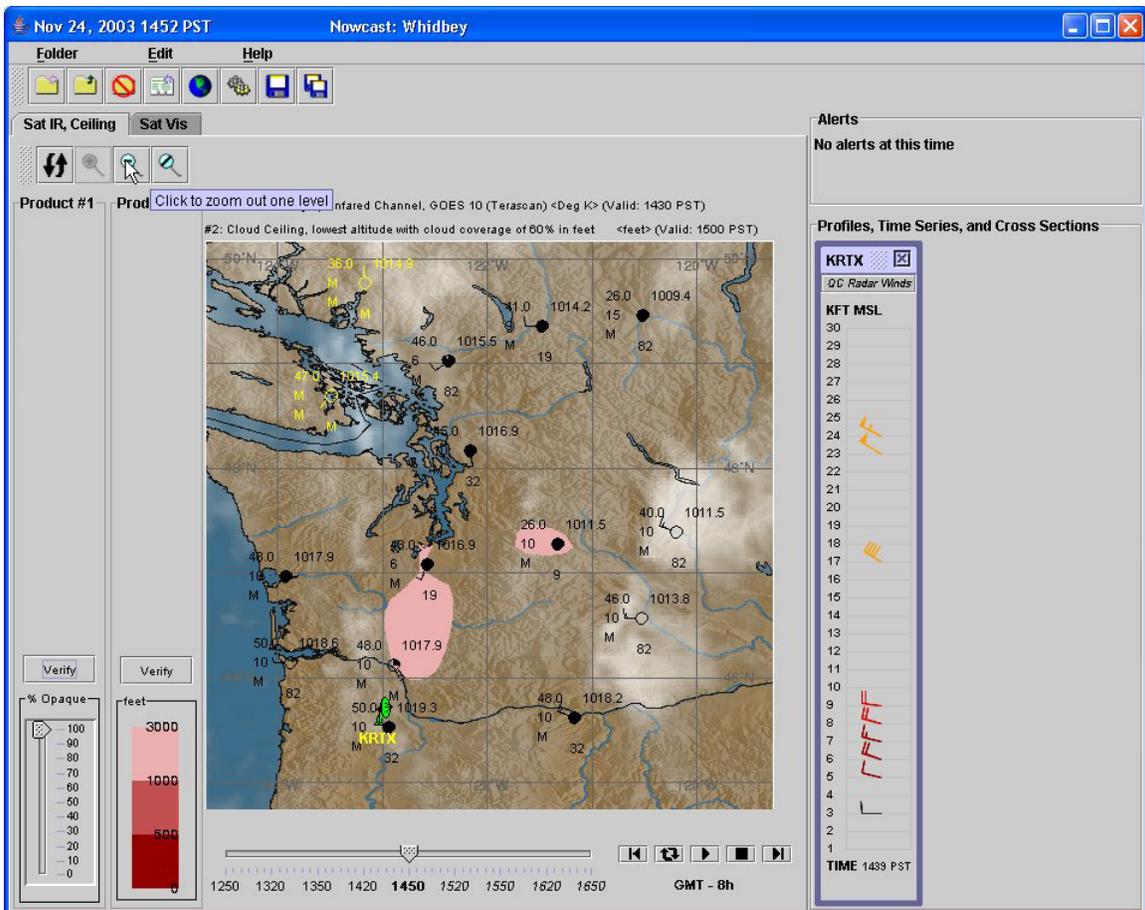


Fig. 10

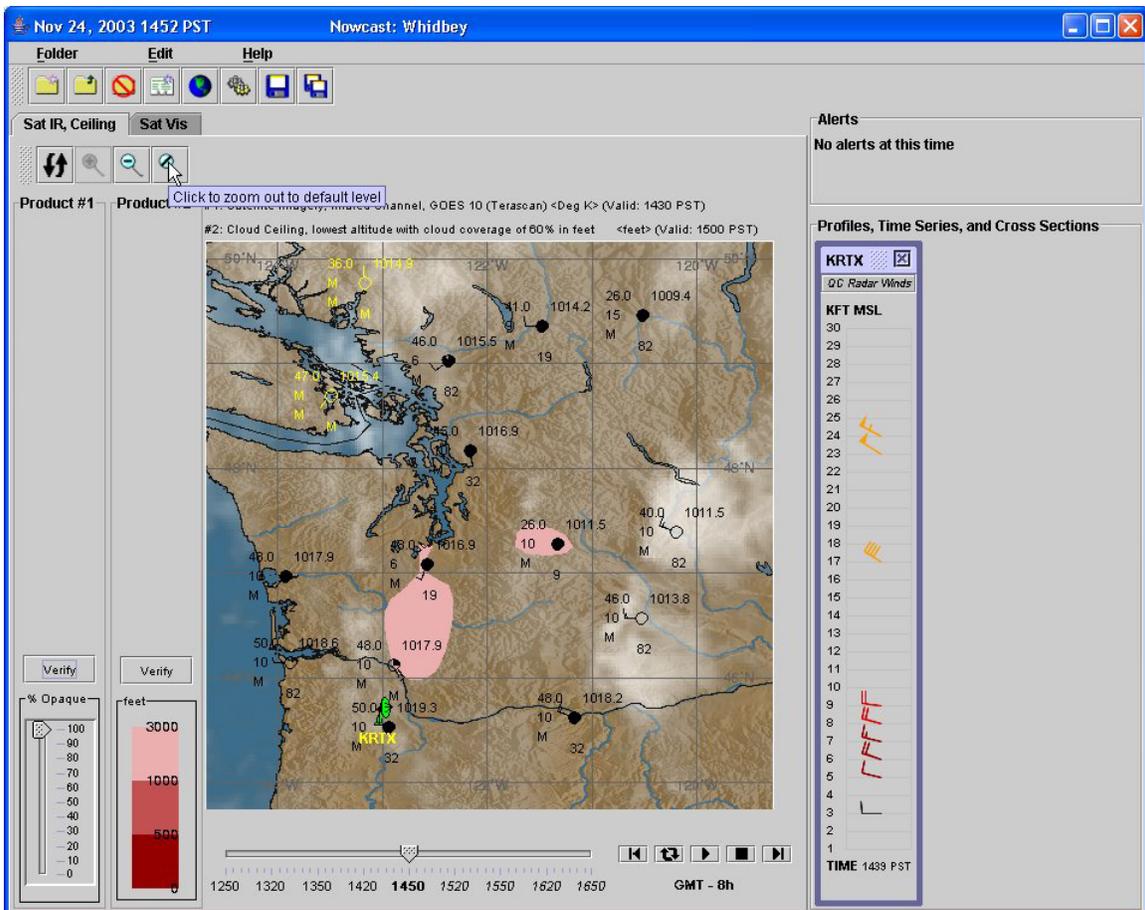


Fig. 11

A user may also create a new region for the tab by clicking on the “New Global Region” icon (Fig. 12) that brings up dialog box with the same name.

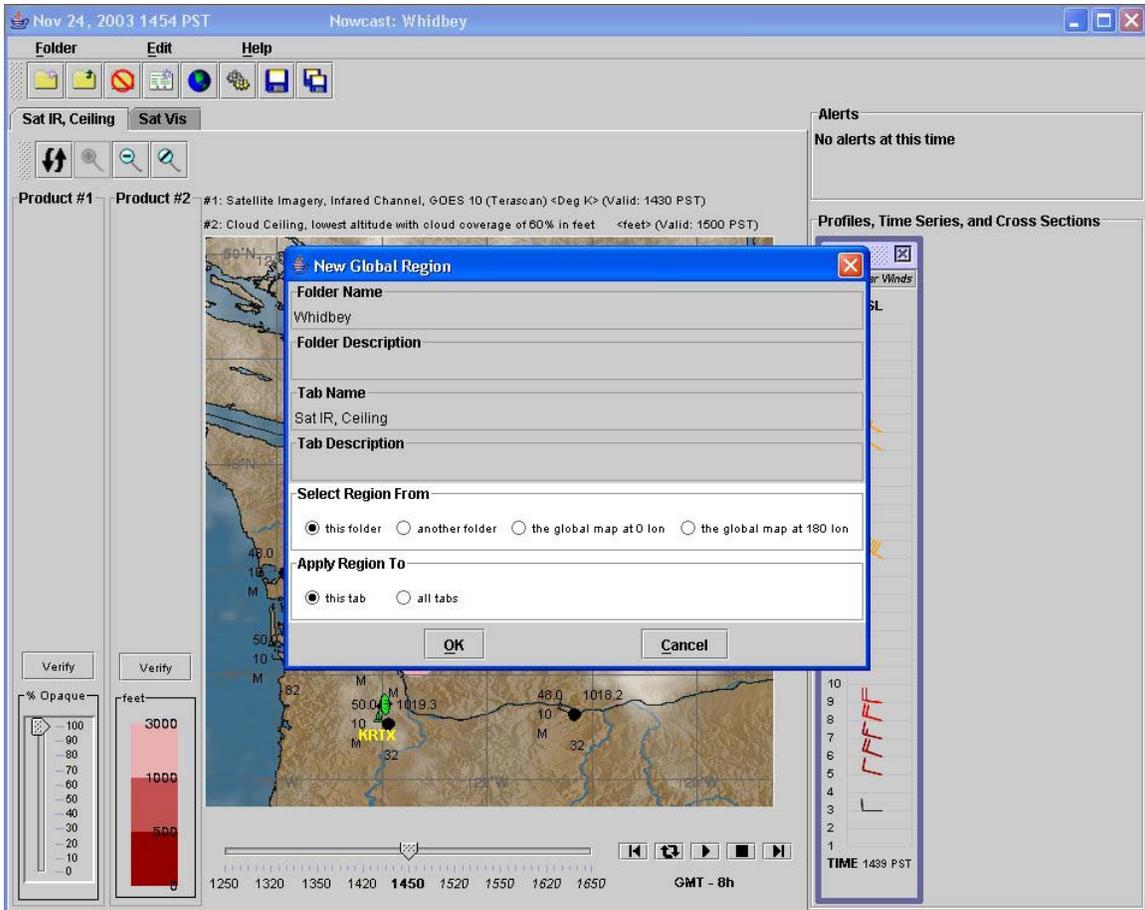


Fig. 12

A region is created from the global map by roping off an area with the mouse while holding down and dragging the left mouse button. As shown in (Fig. 13), when the user is satisfied with the area, click the zoom in magnifying glass icon to retrieve the new map. This process can be repeated until the desired map display is shown. Finally, click the OK button to save the map on the tab. The colored product list on the right-hand-side is designed to show the user which products and data are available for the selected area.



Fig. 13

Selecting Products in a Tab

Once a region is defined in a tab, and if products are available for that region, it is possible to select a maximum of two products to be displayed in the tab. In the GUI, the products pane is located to the left side of the region image display. This pane can be identified from the labels “Product #1” and Product #2”. Right click in this pane in order to open a new menu with three menu items – one to select products, another to change the product units, and another to select the profiles, time series, and cross sections.

To select or change products in a tab, click on the “Select Products” button (Fig. 14). This causes a dialog to be displayed that contains the products currently available for that region. Select the products of interest (up to two) and click on the “OK” button (Fig. 15).

This causes the corresponding products to be selected and the product images are then fetched from the server and displayed in the tab.

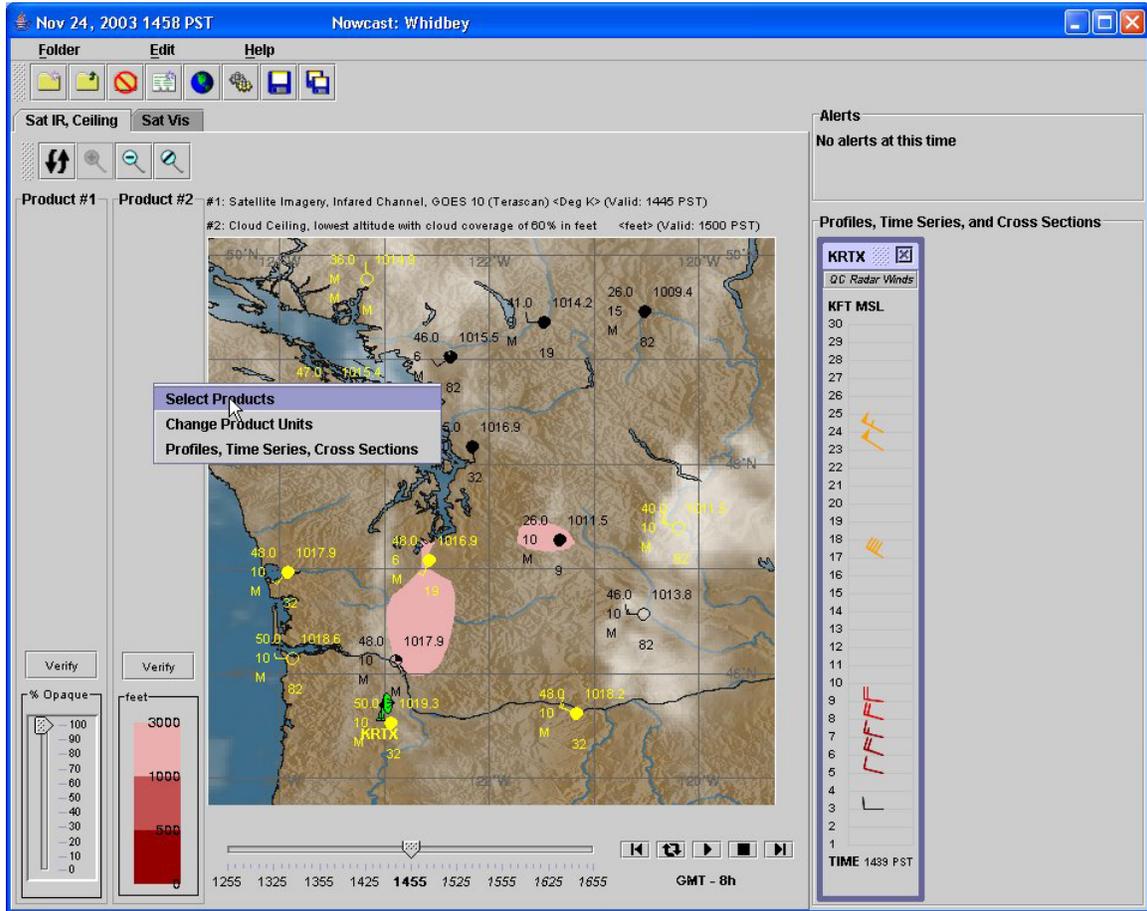


Fig. 14

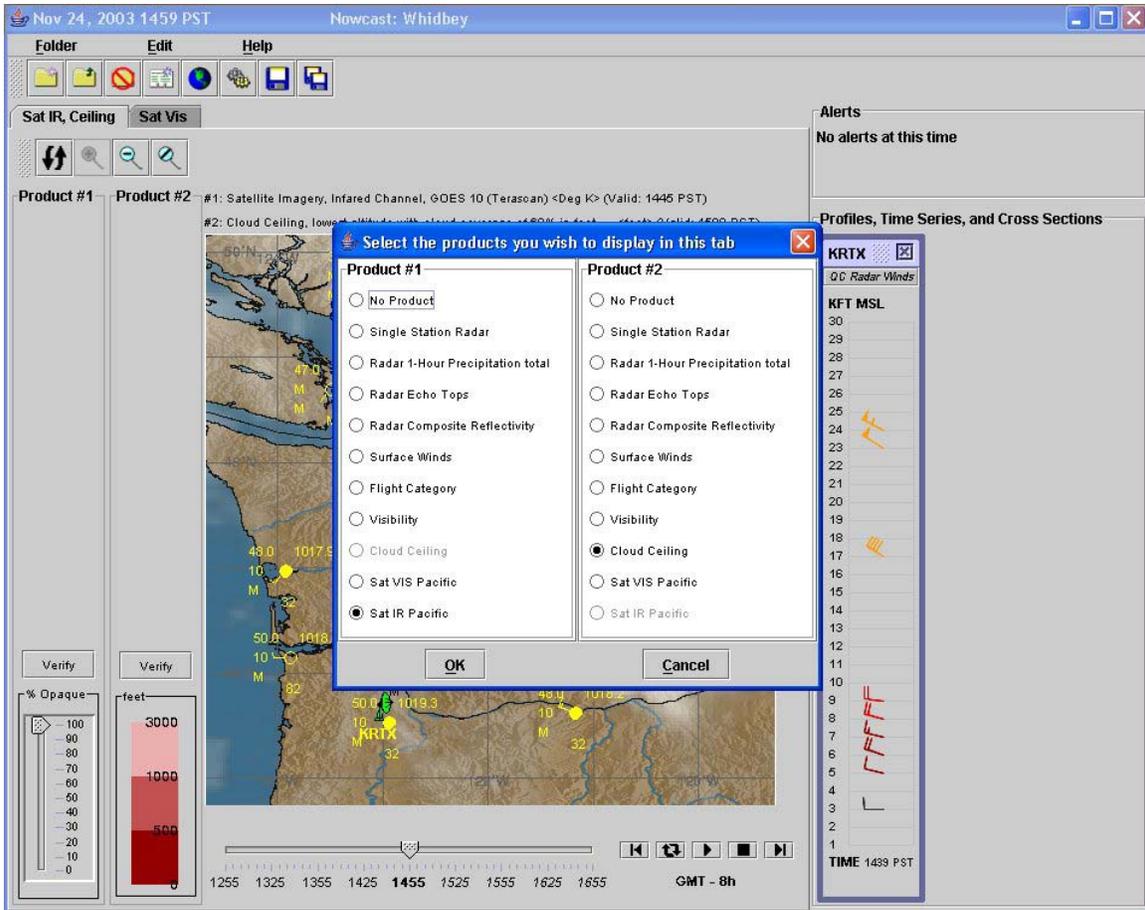


Fig. 15

To change the product units in a tab, click on the “Change Product Units” button (Fig. 16). If a product has one or more units available, they are displayed in a dialog. Select the units desired and indicate whether the units are to be applied only to this tab, to all tabs in the current folder, or to all tabs in all the folders owned by the user. Finally, click “OK” for the desired change to take into effect (Fig. 17).

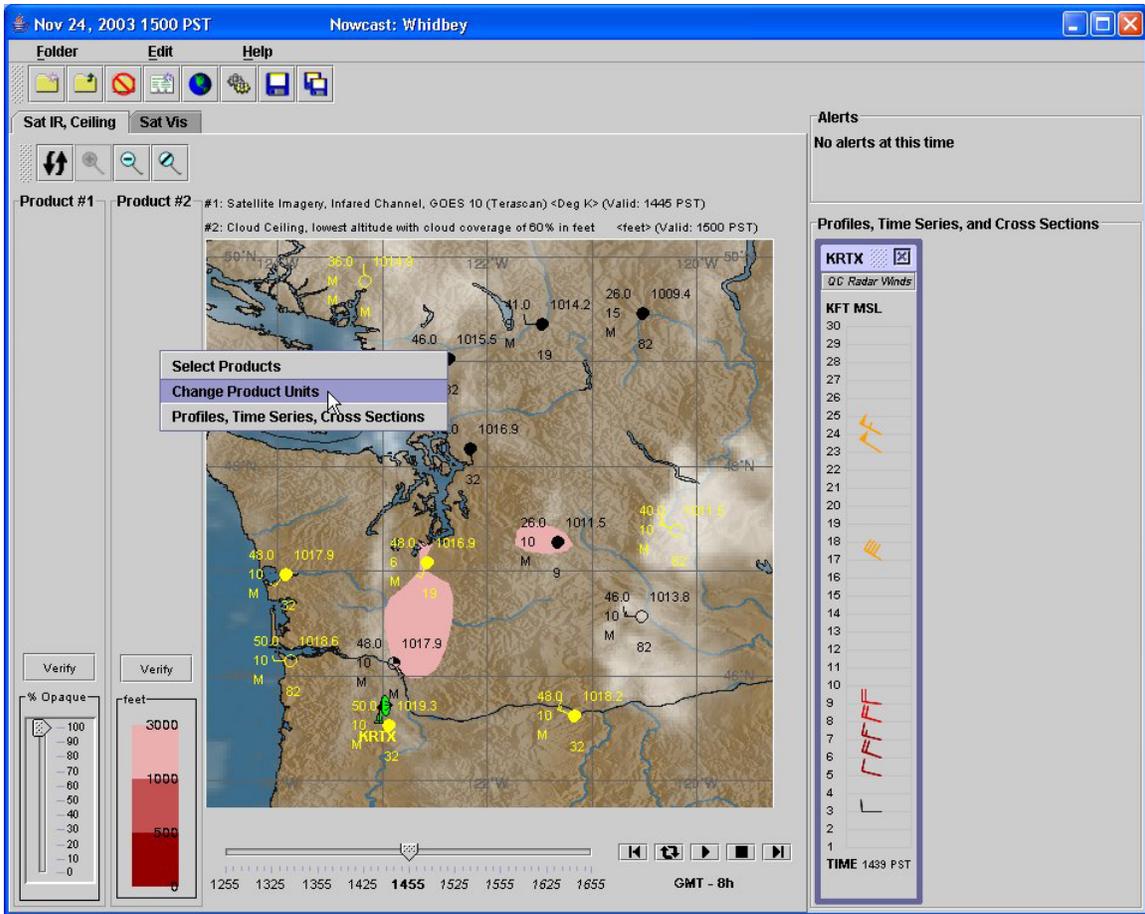


Fig. 16

Similarly, a right-click on the images brings up a dialog with 2 buttons labeled “Change Station Data Display Mode” and “Change Product Display”. The first option displays the stations as station plots or points (Fig. 18). The second option enables a user to either hide or display the images of a product in the tab (Fig. 19).

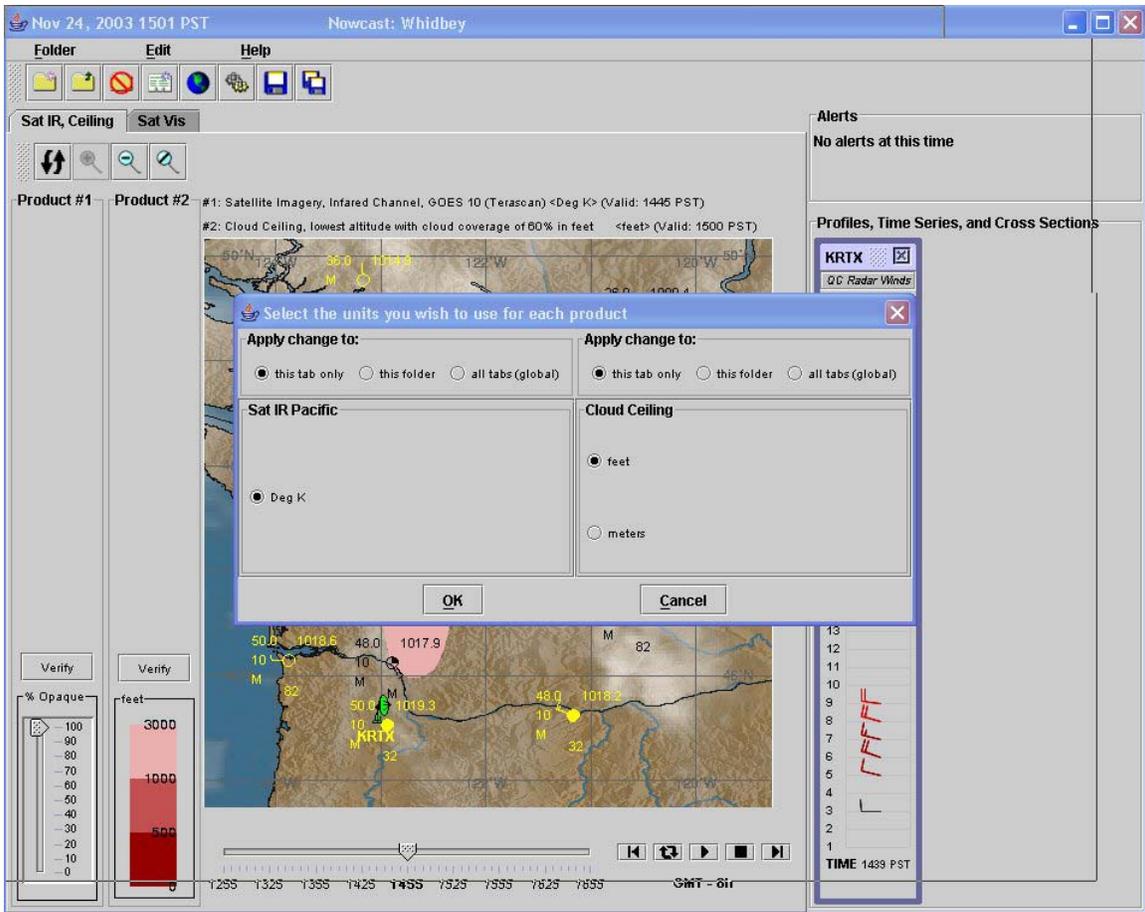


Fig. 17

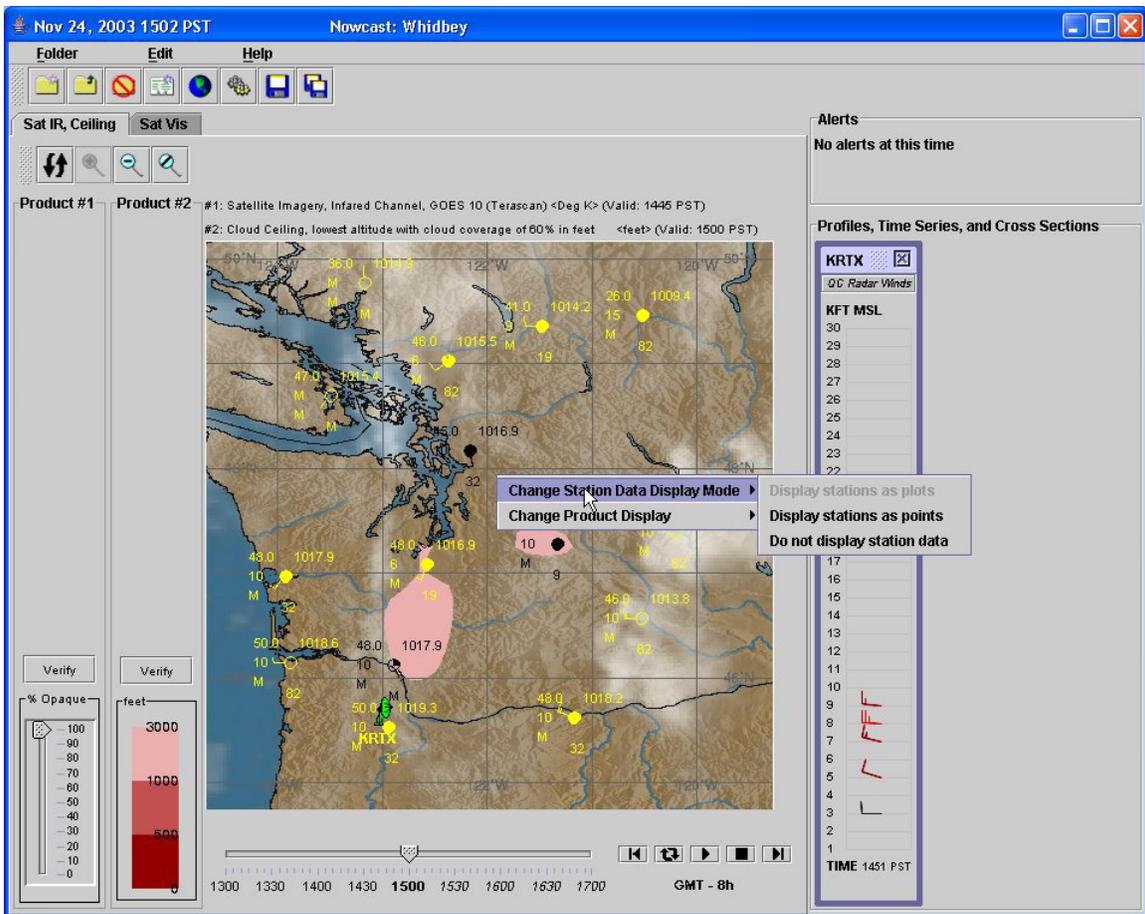


Fig. 18

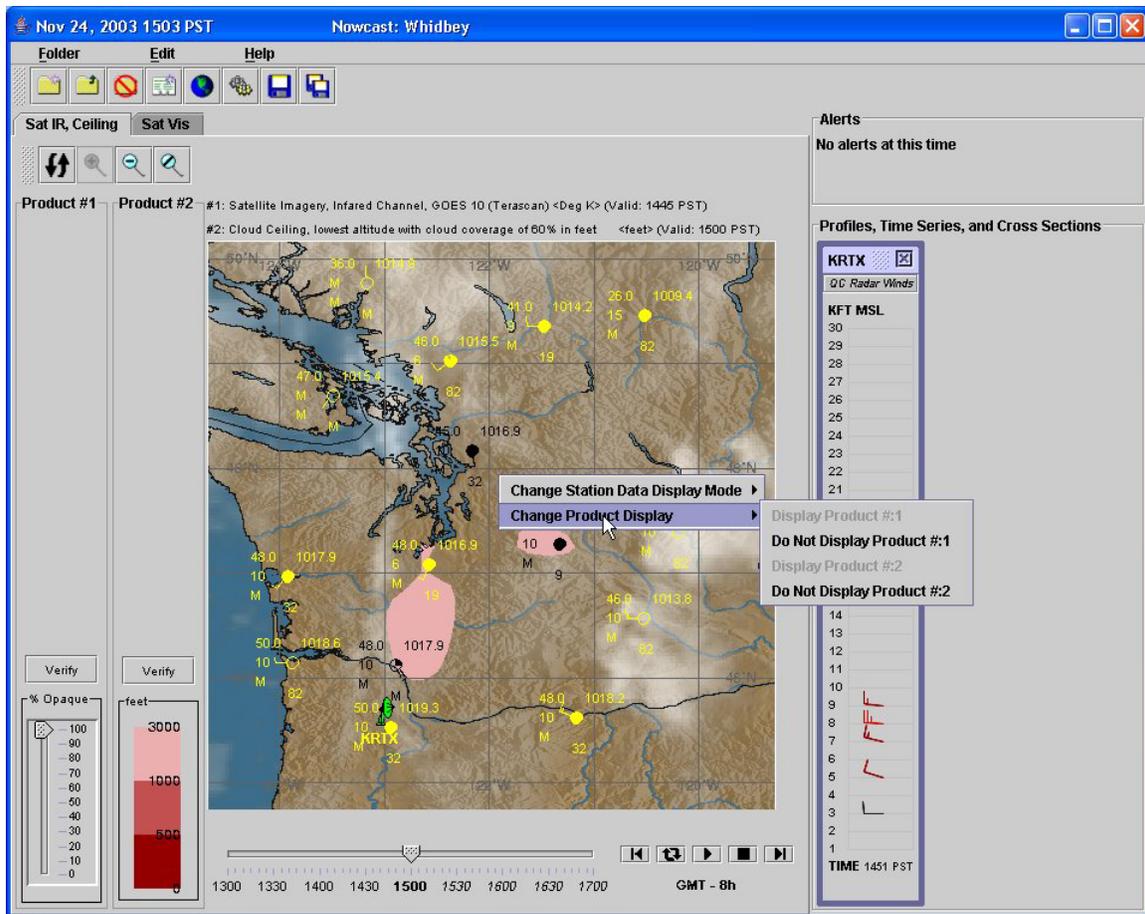


Fig. 19

Selecting a Single Station Radar Product

The user has the capability to view radar data from an individual station. To do this, select Single Station Radar from the product list (Fig. 15). This can be selected for either Product #1 or Product #2, but not both. After this is selected and OK is clicked on the product list dialog, a new dialog is presented (Fig. 20). This dialog allows the user to select both the station and parameter of interest.

By default the station that falls closest to the center of the map is initially selected. The user may change this to be another station by clicking on the Stations button. This will present the user with a list of radar stations that have coverage in the tabs domain (Fig. 21). Select a station and click ok.

After clicking OK the dialog that lists the different stations will go away. Now, highlight the radial that corresponds to the parameter of interest. Then click ok. The data will be requested from the Nowcast server.

While single station radar products are being displayed in the GUI, radar symbols will also be displayed on the map that shows the user where the different radar stations are located. The active station, or the one selected, shows up in red (Fig. 22).

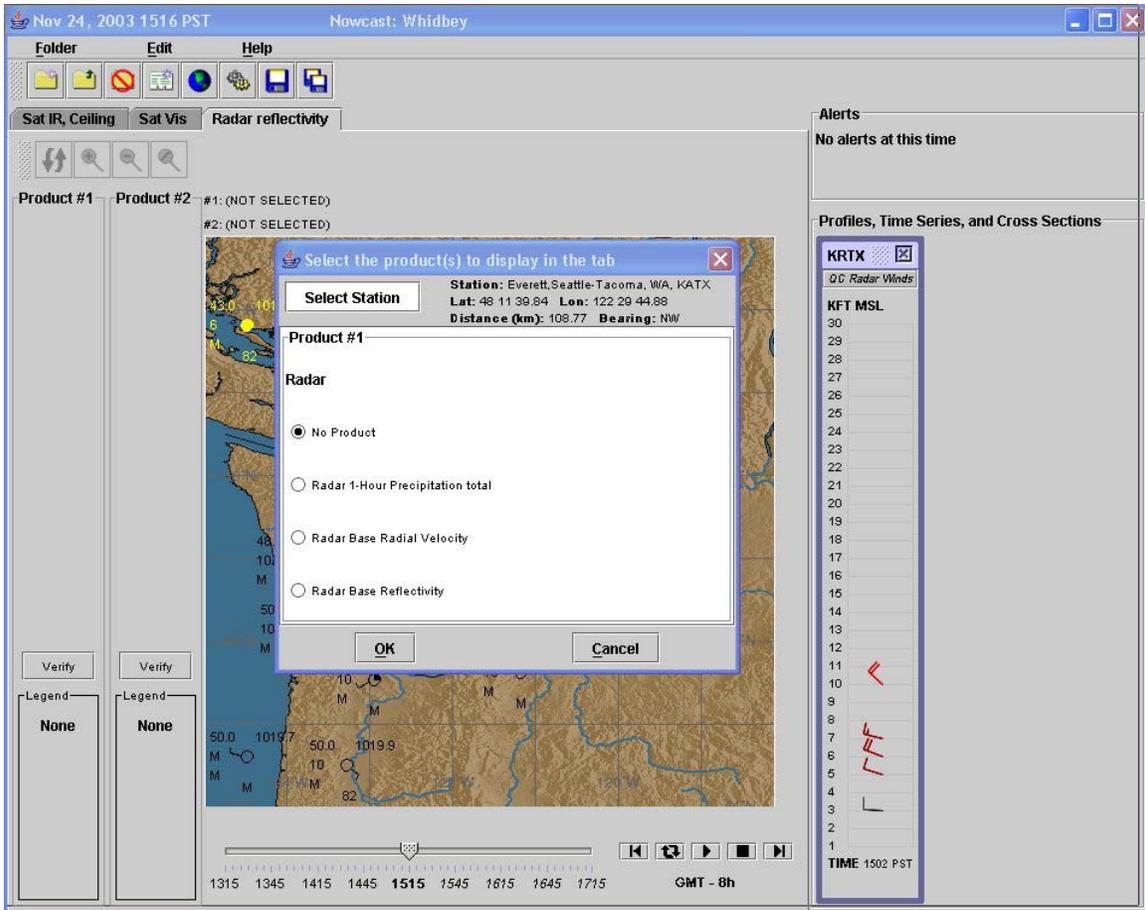


Fig. 20

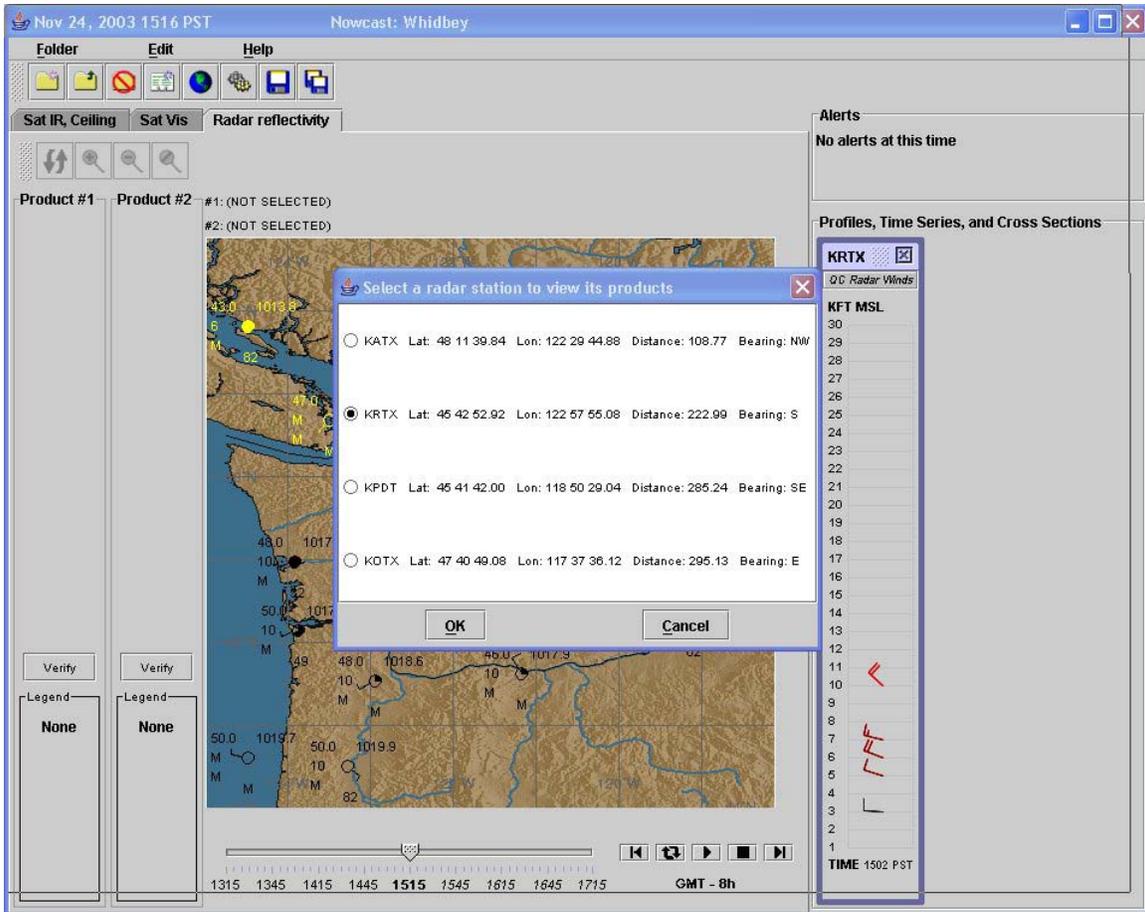


Fig. 21

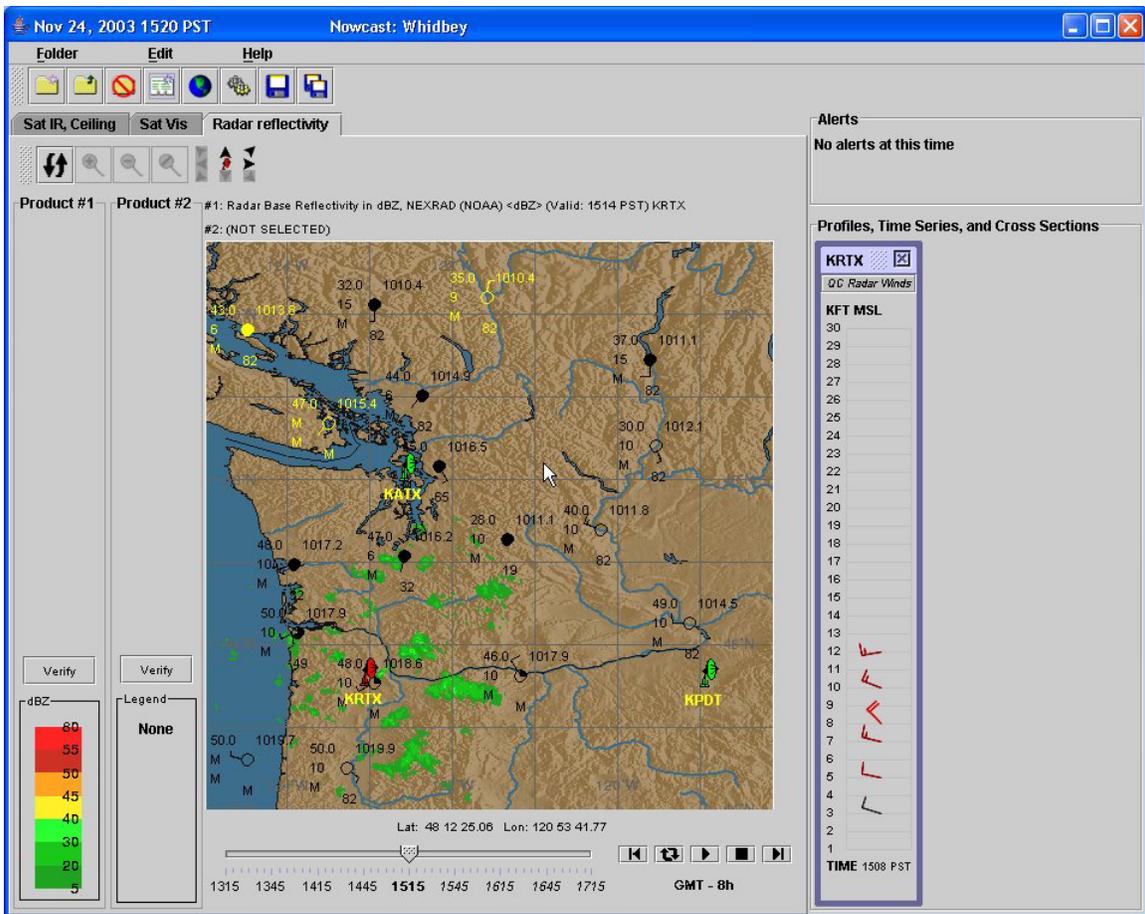


Fig. 22

At this point, if the user wanted to change the parameter of the station that is displayed on the map, then they have a couple of different options. The first option is to right click on the radar symbol that is being displayed on the map. The second option, which yields the same results, is to click on the radar symbol icon that is displayed above the product titles (Fig. 23). These two options will pop up the dialog that allows the user to select the station and parameter.

The user can also use the arrows, which are located above the product title. These arrows allow the user to switch to the corresponding station, while maintaining the same parameter (Fig. 23).

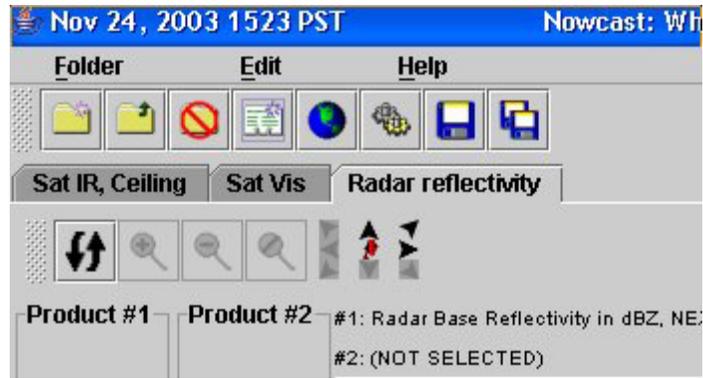


Fig. 23

Selecting Profiles, Time Series, and Cross Sections

Currently the only type of data implemented here is Radar Wind Profiles. The other types listed are for future considerations.

Once a region is defined in a tab, it is possible to display the radar wind profile data if there is any such data in your domain. Right click on the GUI below the Product #1, Product #2 titles (Fig. 24). Select the third item, which is entitled Profiles, Time Series, and Cross Sections.

This will present the user with a new dialog (Fig. 25). Highlight and click on 'Radar Wind Profile' from the list. The list of available stations then appears on the right. Next, check the stations that you are interested in. Now, click Apply then finally OK. The data will be requested from the server, downloaded, and displayed (Fig. 26).

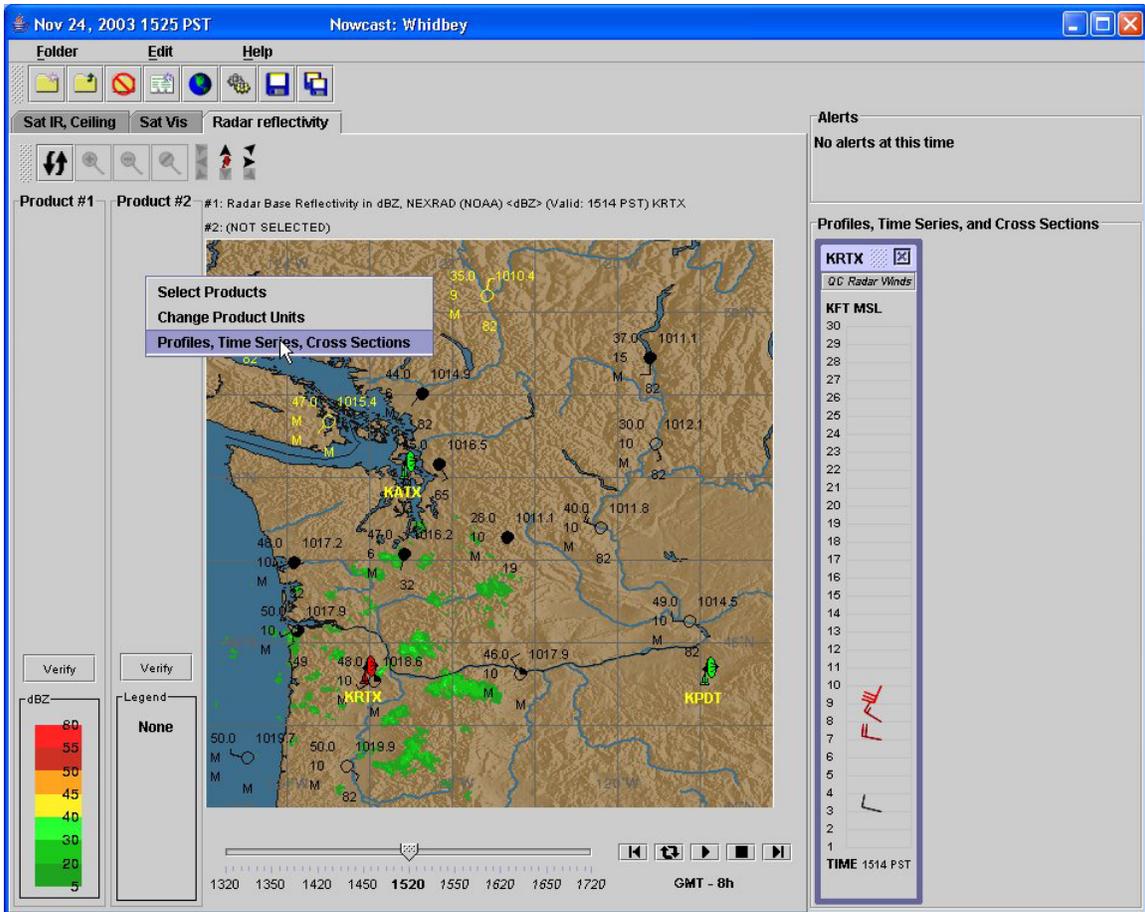


Fig. 24

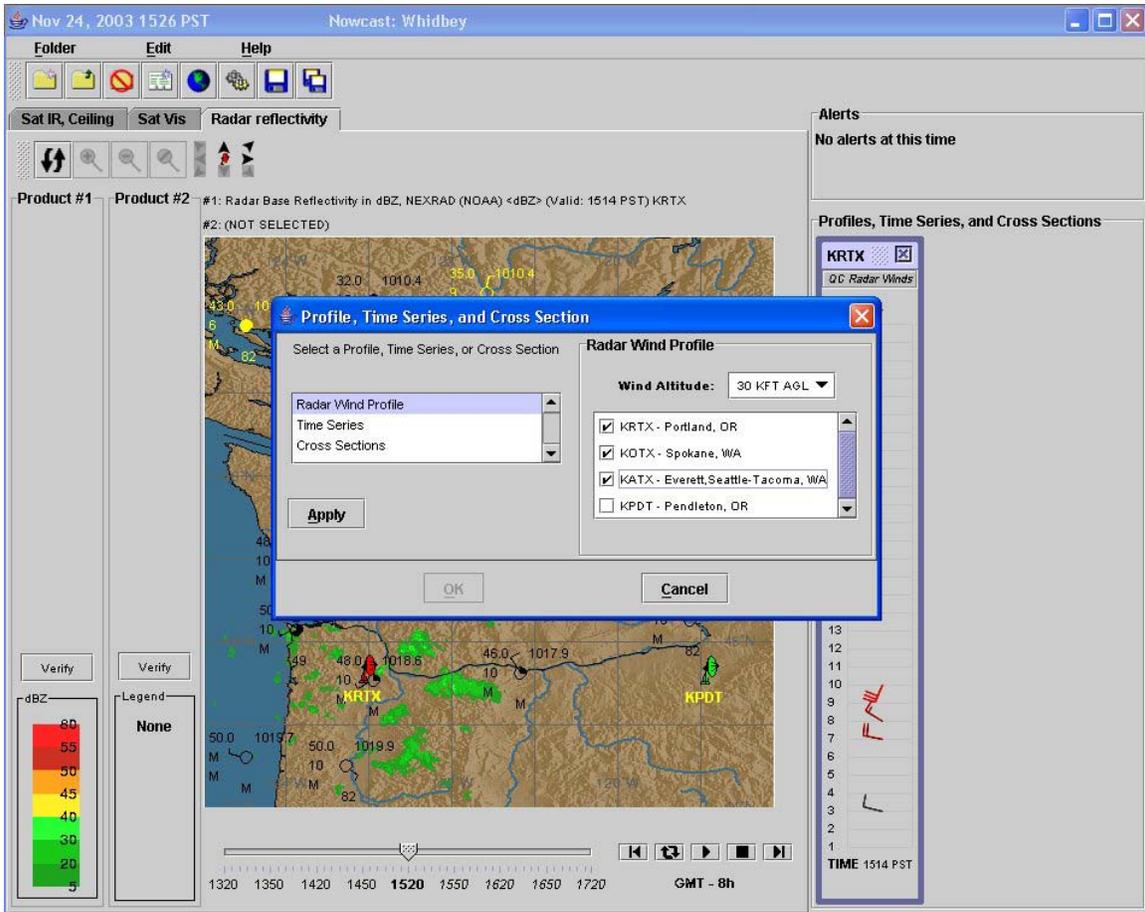


Fig. 25

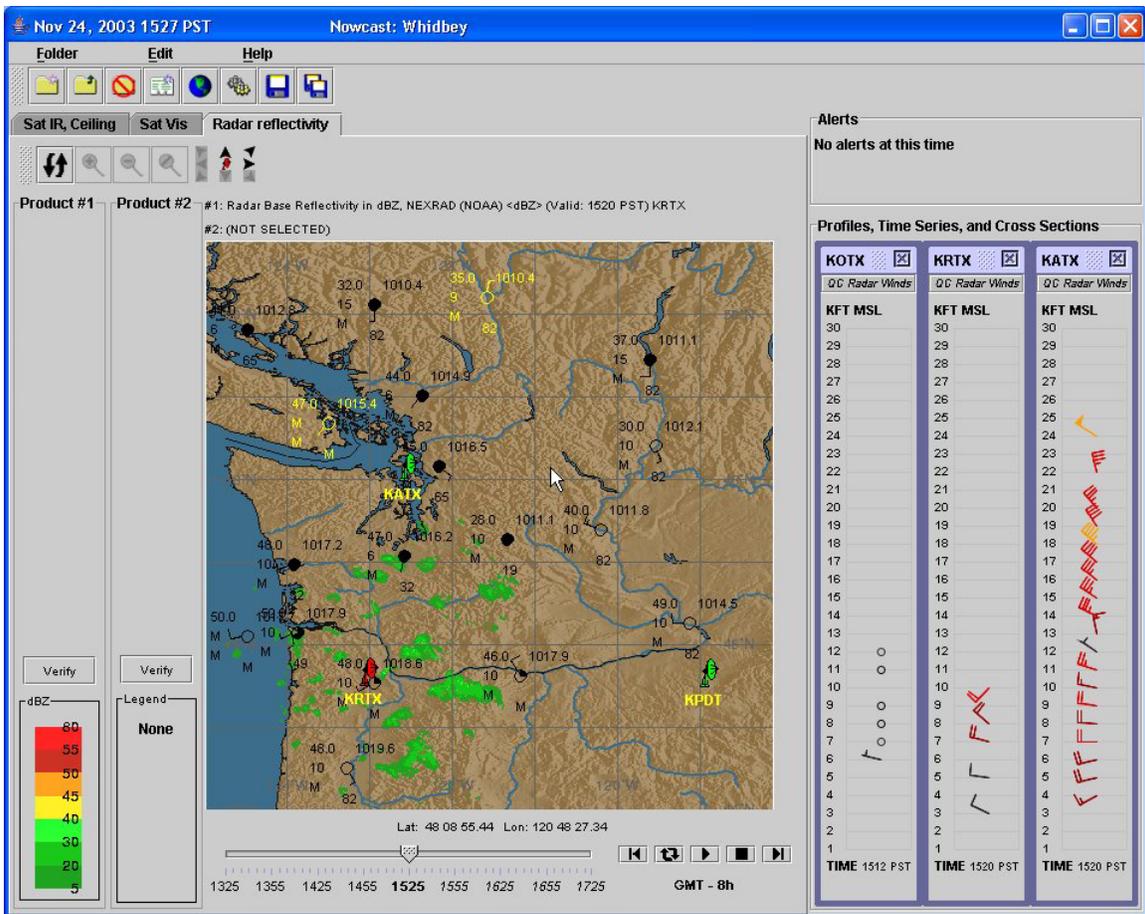


Fig. 26

Opening a Folder (Folder -> Open)

If the user wishes to view another folder, (Folder -> Open) from the main menu bar (Fig. 27), can be selected or the Folder icon can be clicked. Subsequently, a dialog pops up (Fig. 28), which displays a list of the folders created by the user, a list of shared folders created by the METOC user, and a list of shared folders (Folders -> Shared) (Fig. 29) created by other end users. A user may at any time decide to make their folder shared or private. This operation may not be performed on folders that are not created by the user. Note that this option is not implemented yet. In summary, a user may view any folder that is presented to them in the Folder Open dialog, but may change and save only those folders that were created by them.

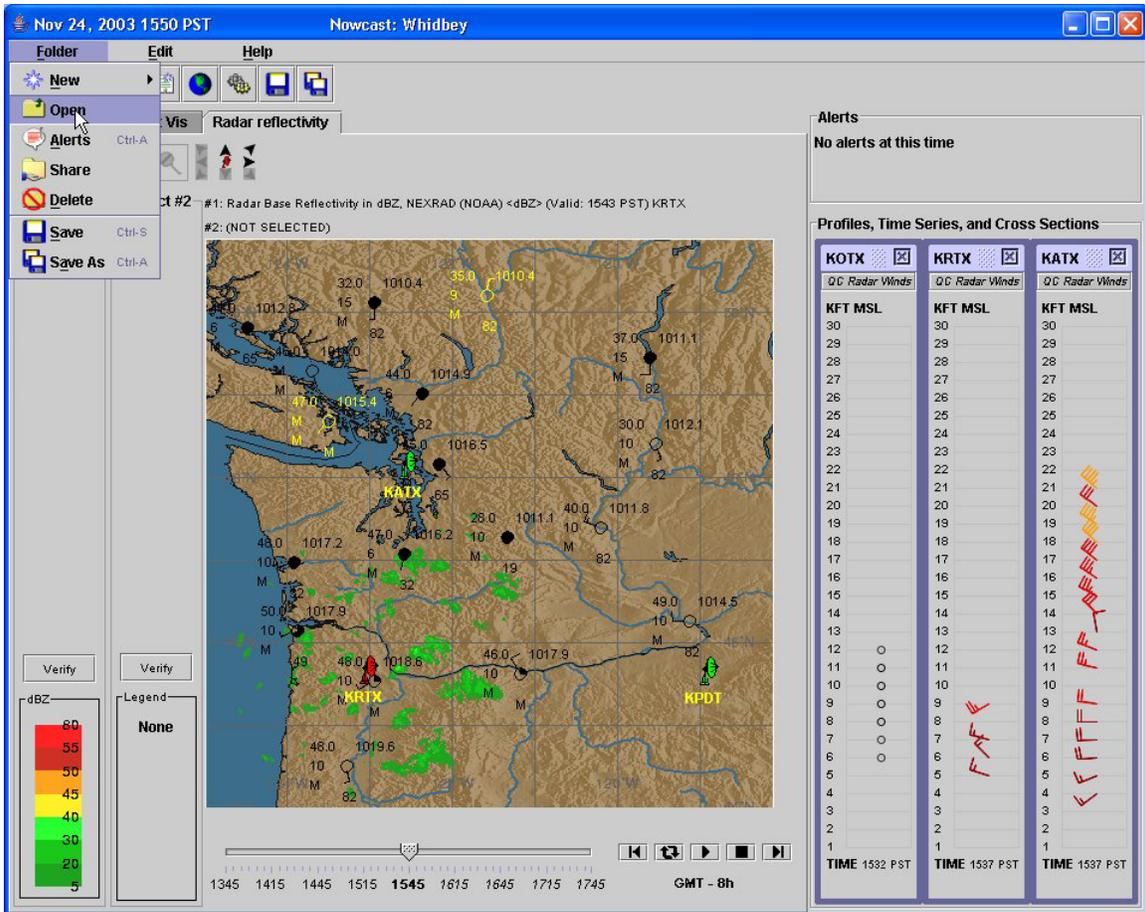


Fig. 27

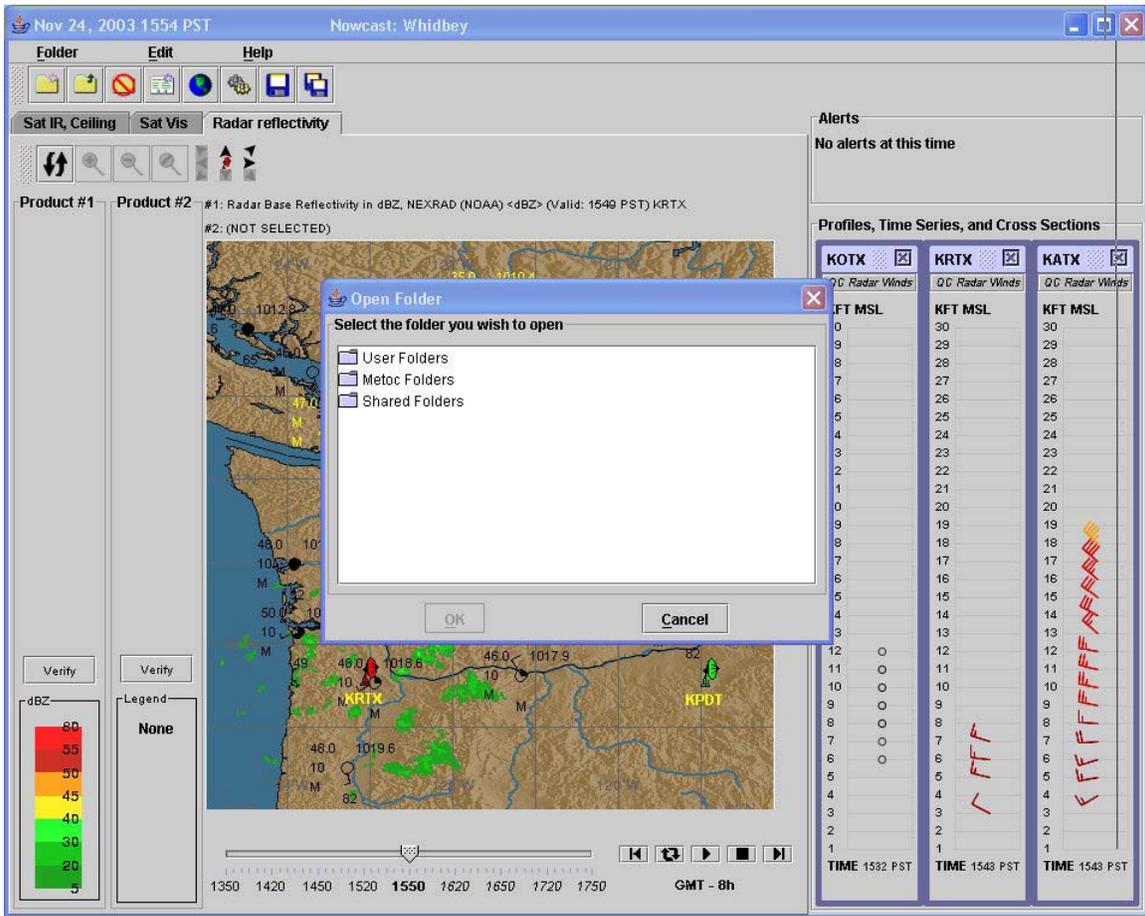


Fig. 28

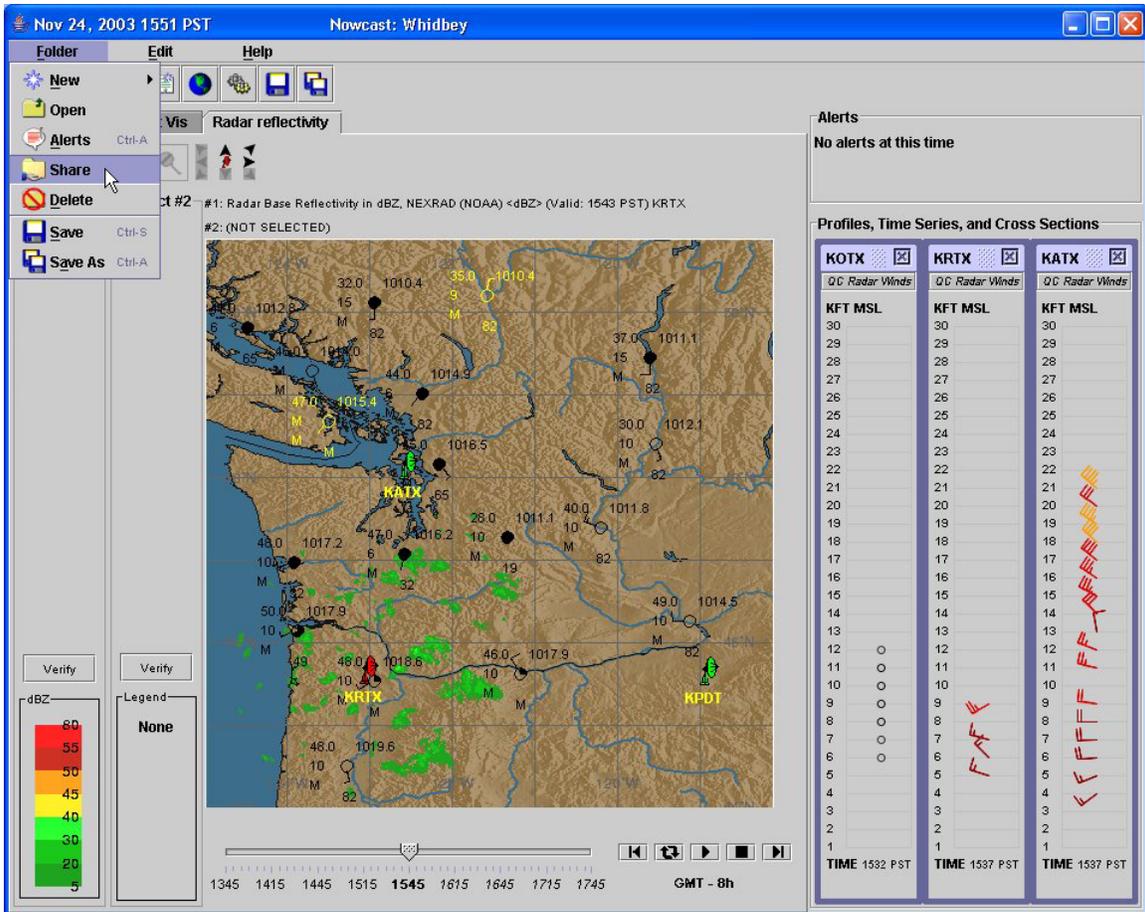


Fig. 29

Deleting a Folder (Folder -> Delete) or a Tab

In order to delete a folder, the user has to select (Folder -> Delete) from the main menu bar (Fig. 30). A dialog pops up in response to this action (Fig. 31) and this dialog enables the user to select the folder for deletion. A user may not delete a folder that they did not create. To delete a tab, the user must first select the tab by left clicking (to highlight) the tab. Next, they must right click on the tab. This command presents a few options such as reordering the tabs and deleting the selected tab.

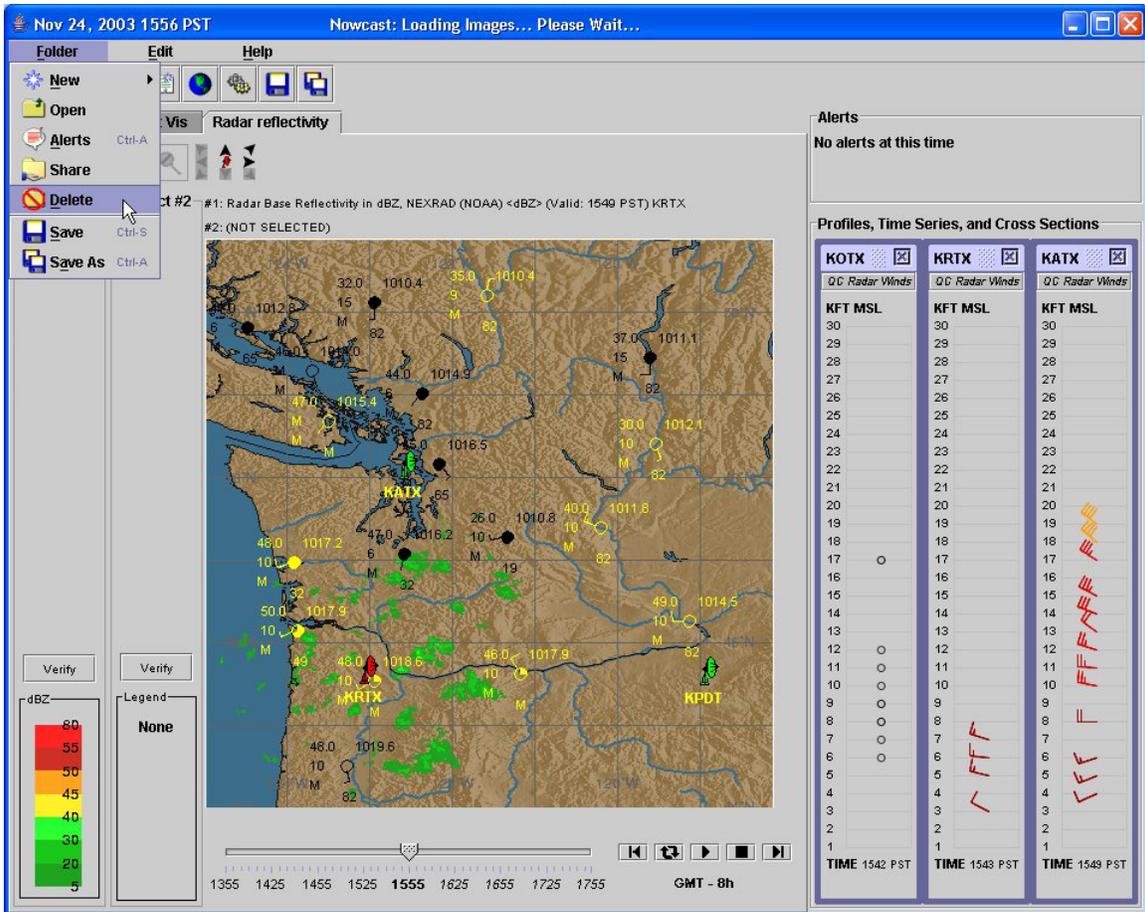


Fig. 30

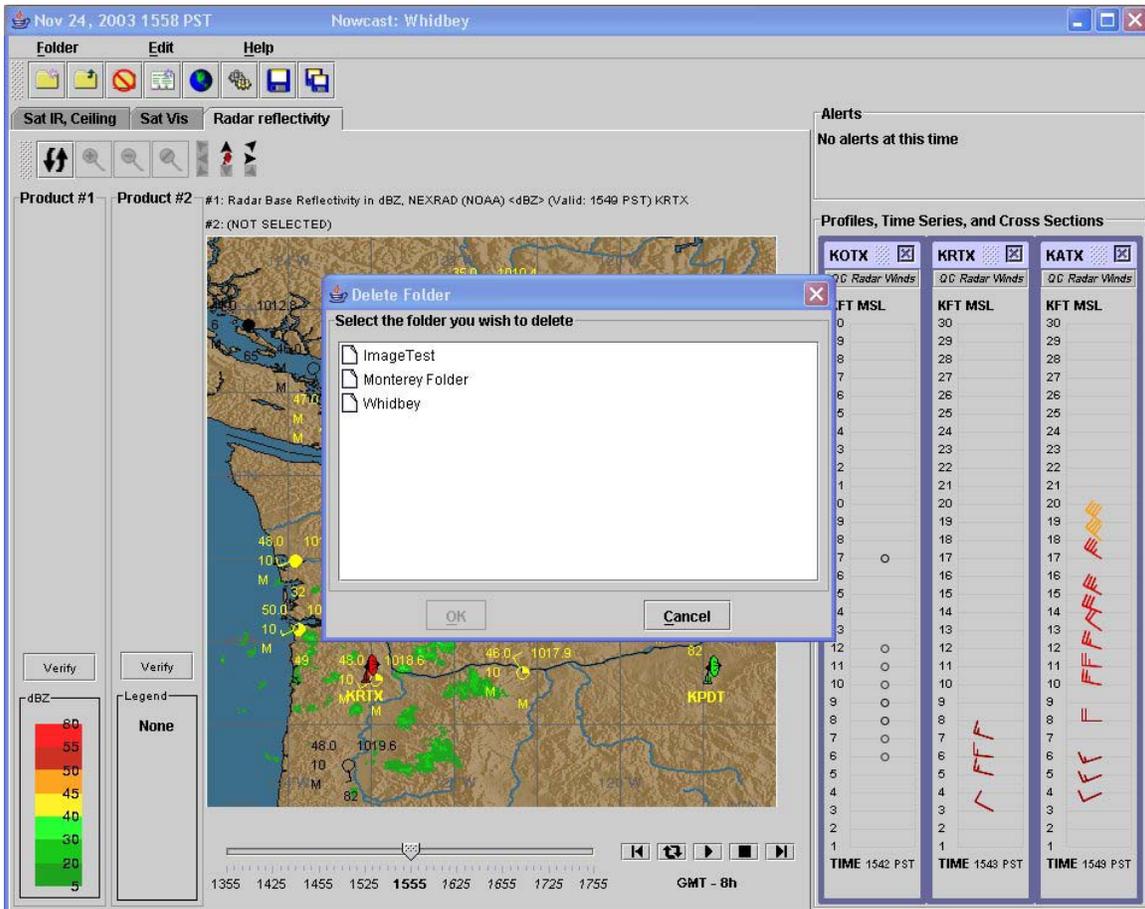


Fig. 31

Saving the changes to a Folder (Folder -> Save)

Any changes to a folder will have to be saved if they are to be retained for the future. A user is permitted to make changes to a folder for viewing and experimenting, but is not permitted to save changes to a folder not created by the user. If the user wishes to save the changes made to a folder not created by the user, the user will have to use the “Save As” option (Folder -> Save As) from the main menu bar (Fig. 32) and save those changes to a new folder. When a user makes use of the “Save As “ option to save a folder, the new folder becomes the currently displayed folder. For example, if a user edits a METOC folder and saves the changed folder as their own, then the displayed folder becomes the user’s folder and subsequent changes can be saved directly, without the “Save As” option.

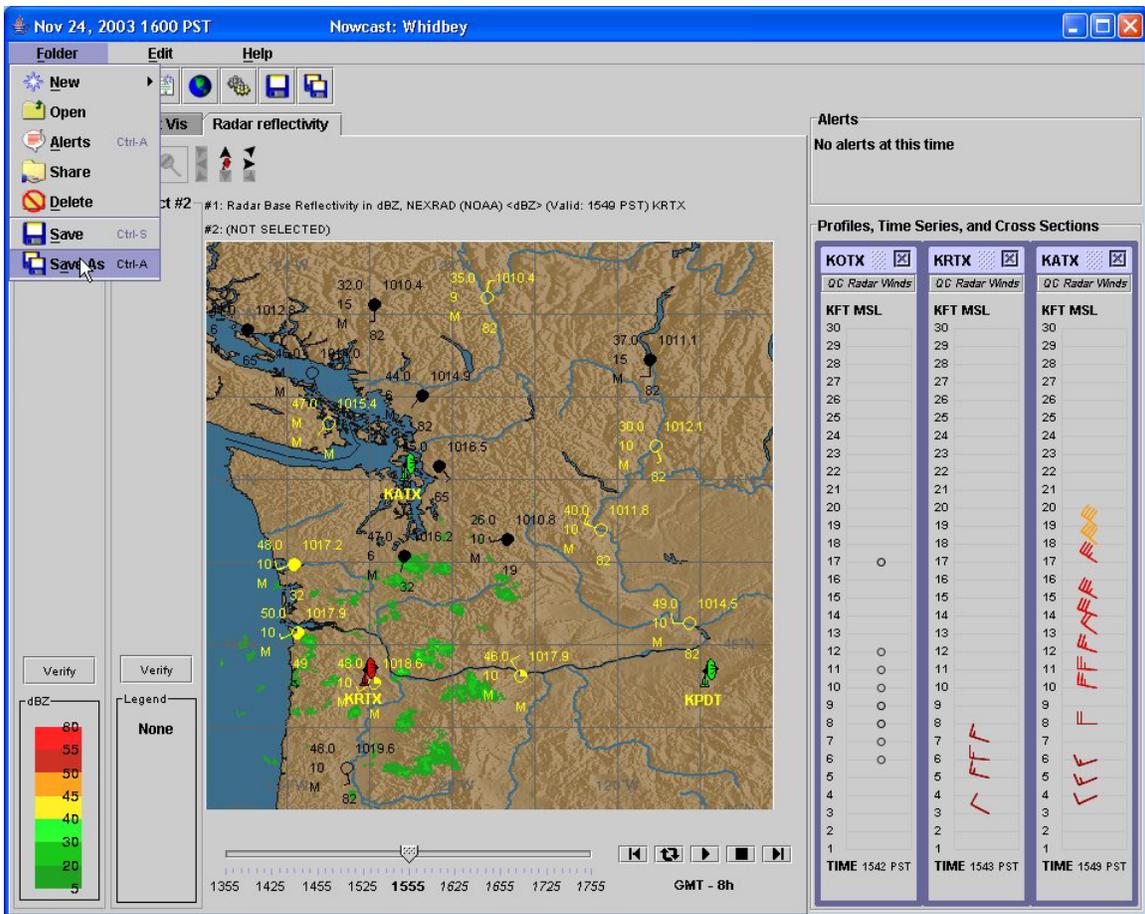


Fig. 32

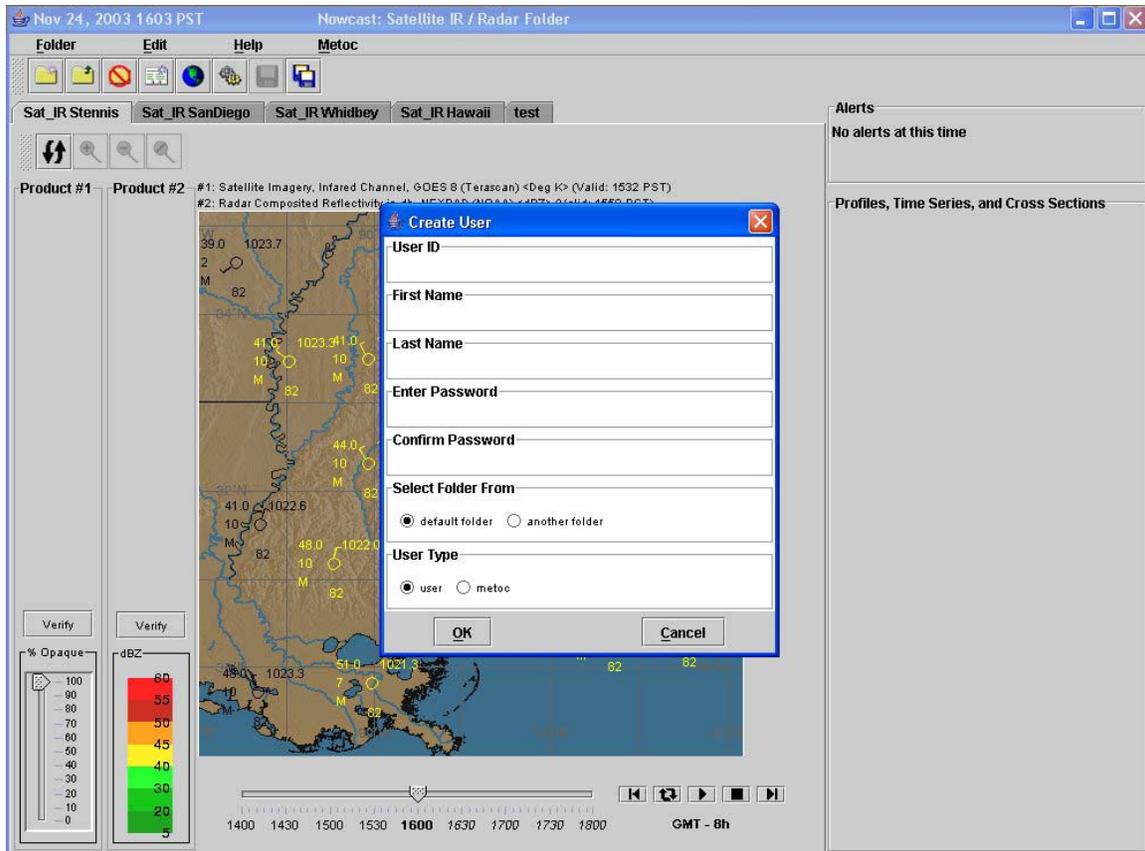


Fig. 34

The METOC user who created the new user account might wish to create one or more folders in this account for the new user. First, the METOC user has to log into Nowcast using the new user's login and password (the procedure to create new folders is described above).

In order to create copies of existing folders:

- 1) Load a METOC or Shared folder.
- 2) Make any desired changes to the folder.
- 3) Save the folder to the new user account using the "Folder Save As" feature.