WeatherProducer

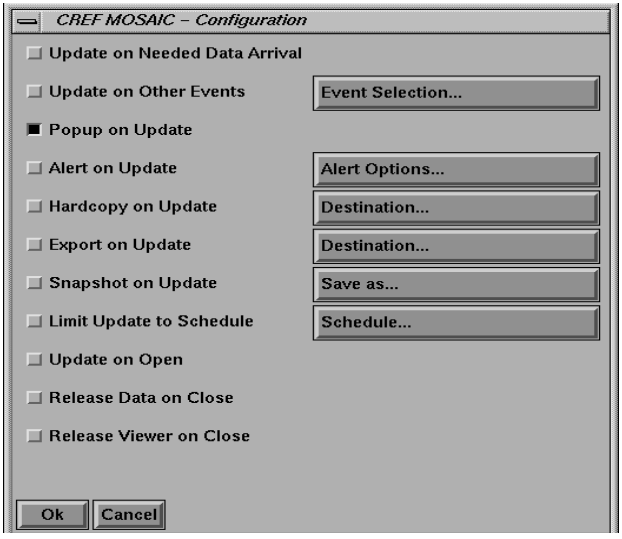
Product Configuration

Each WeatherProducer product is uniquely configurable and every product has a set of configuration parameters. Configuration parameters for each product are accessed through the Change Configuration option on the view window Processing menu or the icon pop-up menu. Configuration parameters are designed to manage:

- Actions which occur in response to product updates and other pre-defined events.
- Updates and actions which occur within a pre-defined schedule.
- The handling of data when a product window is closed.

The configuration parameters are discussed sequentially according to their position in the Configuration Parameters window with the exception of the Update on Other Events parameter. Due to the scope of this parameter it is discussed later in the chapter in a section titled “Event handling” on page 11.

Figure 1: Configuration parameters



Select the view window Product menu Save option to save configuration parameter settings with the product to the WeatherProducer datastore.

Update on needed data arrival

Enable Update on Needed Data Arrival to cause the product to update as new data for the product arrives.

To avoid updating too frequently, and slowing the system, the product updates when data from a specific percentage of the stations in the station list arrives. The product continues to update when data from any station in the list arrives, until the next data granularity period. The system will again wait until the specified percentage of the stations report new data.

As such, when using Update on Needed Data Arrival, you need to specify a station list to generate data, rather than a region. See “Station parameter” on page 3 for more information on station lists and regions.

Update on Other Events

Enable Update on Other Events to cause the product to update in response to pre-defined events, events which are based on a data condition, a parameter condition, a timer condition, or a lightning condition.

Refer to “Event handling” on page 11 for information on specifying the events that trigger an update.

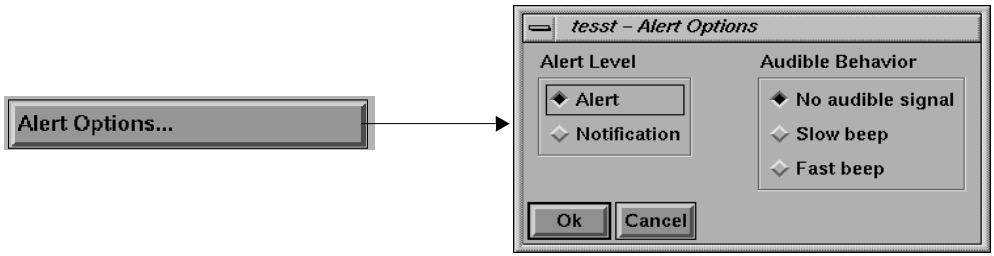
Popup on update

Enable Popup on Update to cause the product view window to open each time the product is updated with new data.

Alert on update

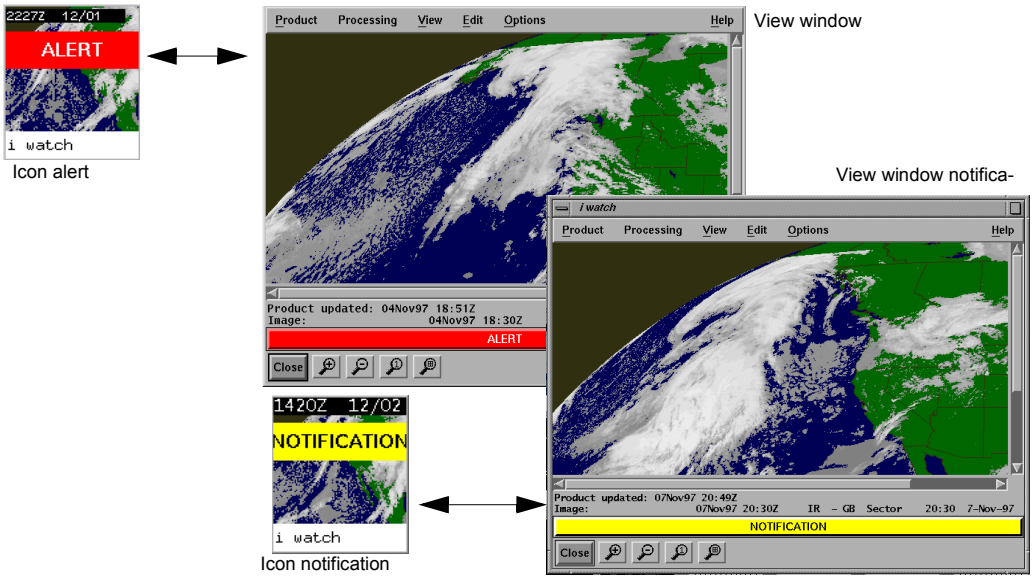
Enable Alert on Update to cause the icon to indicate an alert each time the product is updated with new data. Define the nature of the alert by clicking on the Alert Options button and making selections in the Alert Options window (see Figure 2).

Figure 2: Alert options window



When Alert on Update is enabled a banner is (re)displayed across the product icon or the product view window each time the product is updated. For an alert-level alert the banner is red; for a notification-level alert the banner is yellow. Use the right mouse pull down menu to remove a banner from an icon. Click anywhere on the banner to remove the banner from the current view window.

Figure 3: Sample alerts and notification



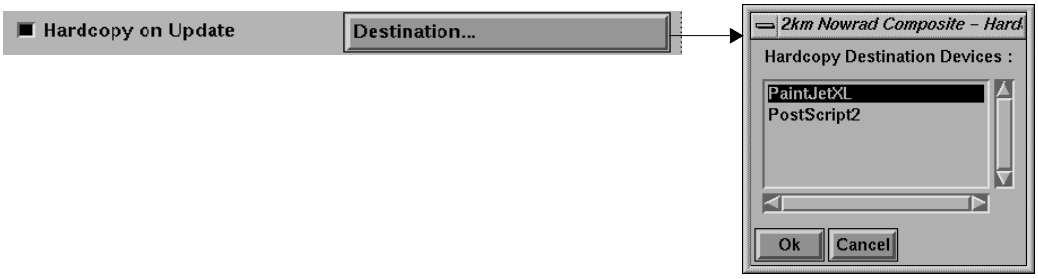
Hardcopy on update

Enable Hardcopy on Update to generate a printout of the product each time the product is updated with new data.

NOTE: To generate a printout each time the product is manually updated (by clicking the Update Now button or selecting the command from a menu) set the post_build_on_manual_updates parameter in the ww_config.txt file to True. Refer to the WeatherPoducer Technical Reference for more information.

To specify an output device, click the associated Destination button and select a printer from the list presented in the Hardcopy Destination Devices window. Available printers are determined through configuration and are selected for display in the Hardcopy Destination Devices window based on product type (text, graphic).

Figure 4: Sample hardcopy destination devices window



NOTE: Either Update on Needed Data Arrival or Update on Other Events must be selected if using the Hardcopy on Update option.

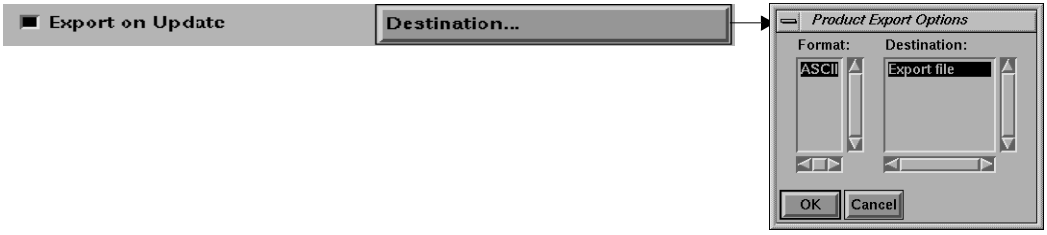
Export on update

Enable Export on Update to copy product data to a destination outside of WeatherProducer each time the product is updated (built).

NOTE: To generate a printout each time the product is manually updated (by clicking the Update Now button or selecting the command from a menu) set the post_build_on_manual_updates parameter in the ww_config.txt file to True. Refer to the WeatherPoducer Technical Reference for more information.

Click the Destination button to bring up the Product Export Options window. In this window you can select format and export destination to convert product data to. The format selection list will include only those formats appropriate for the data in question. All export destinations configured for this installation will display in the destination selection list[1]. For any export destination that is considered “generic” (e.g. local UNIX file) the user will be prompted for a destination file name.

Figure 5: Export specification window



NOTE: Either Update on Needed Data Arrival or Update on Other Events must be selected if using the Export on Update option.

To copy (export) product data on an on-demand basis, utilize the view window Product menu Export option; refer to page 53 for more information.

1. Export destinations are configured in section [EXPORT DESTINATIONS] of the system configuration file; see the WeatherPoducer Technical Reference.

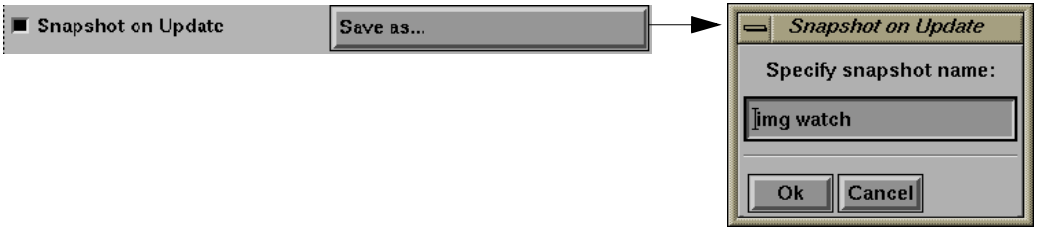
Snapshot on update

Enable Snapshot On Update to save product data as a WeatherProducer snapshot each time the product is updated with new data.

NOTE: To generate a snapshot each time the product is manually updated (by clicking the Update Now button or selecting the command from a menu) set the post_build_on_manual_updates parameter in the ww_config.txt file to True. Refer to the WeatherPoducer Technical Reference for more information.

Specify the file name at the snapshot name popup accessed by clicking the Save As button.

Figure 6: Snapshot name popup

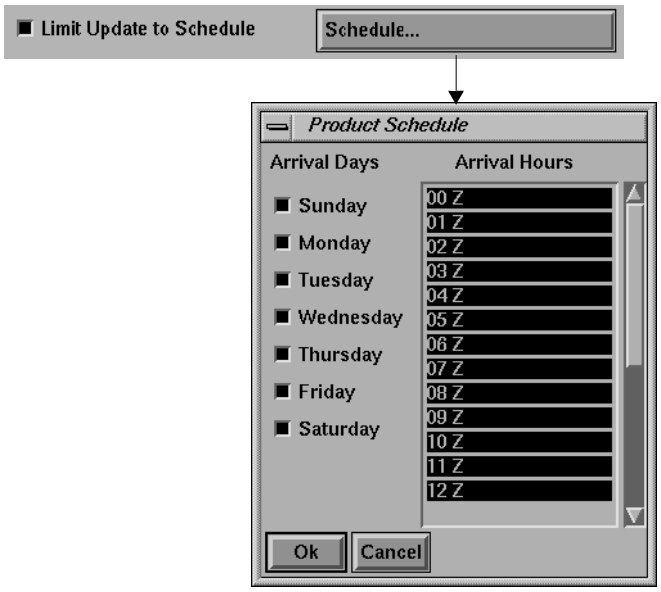


NOTE: Either Update on Needed Data Arrival or Update on Other Events must be selected if using the Snapshot on Update option.

Limit update to schedule

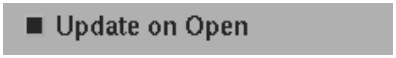
Enable the parameter Limit Update to Schedule to define a schedule of times for which the system will respond to established updates and events for any particular product. Authorize arrival days and arrival hours in the Product Schedule window. Select arrival days by enabling the push button associated with the day. Select multiple arrival hours using the control-left-mouse key sequence (individual selections) and the shift-left-mouse key sequence (group selections). By default all arrival days and arrival hours are selected.

Figure 7: Product schedule window



Update on open

Enable Update on Open to rebuild the product using new data each time the product view window is opened.



Release data on close

Use the configuration parameter Release Data on Close to manage data retention and memory usage for an individual product. The Release Data on Close parameter setting overrides the default setting established for all products in the system configuration file (see your system administrator for more information).

Enable Release Data on Close to release the data and memory associated with a built product when the product view window is closed. The freed memory becomes available for other allocations which is advantageous when memory resources are tight.

Disable Release Data on Close to retain the data (and allocated memory) with the built product when the product view window is closed. This is desirable in situations where you do not want to rebuild the product each time the product is reopened. In this situation, the view window displays the most recently built data.

Release viewer on close

Enable the configuration parameter Release Viewer on Close to release the viewer and the memory and Motif resources associated with a built product when the product view window is closed. This is additional memory to the memory released when Release Data on Close is enabled. Note that data is *not* released when this parameter is enabled. The freed memory and resources become available for other allocations which is advantageous when memory resources are tight.

The Release Viewer on Close parameter setting overrides the default setting established for all products in the system configuration file (see your system administrator for more information).

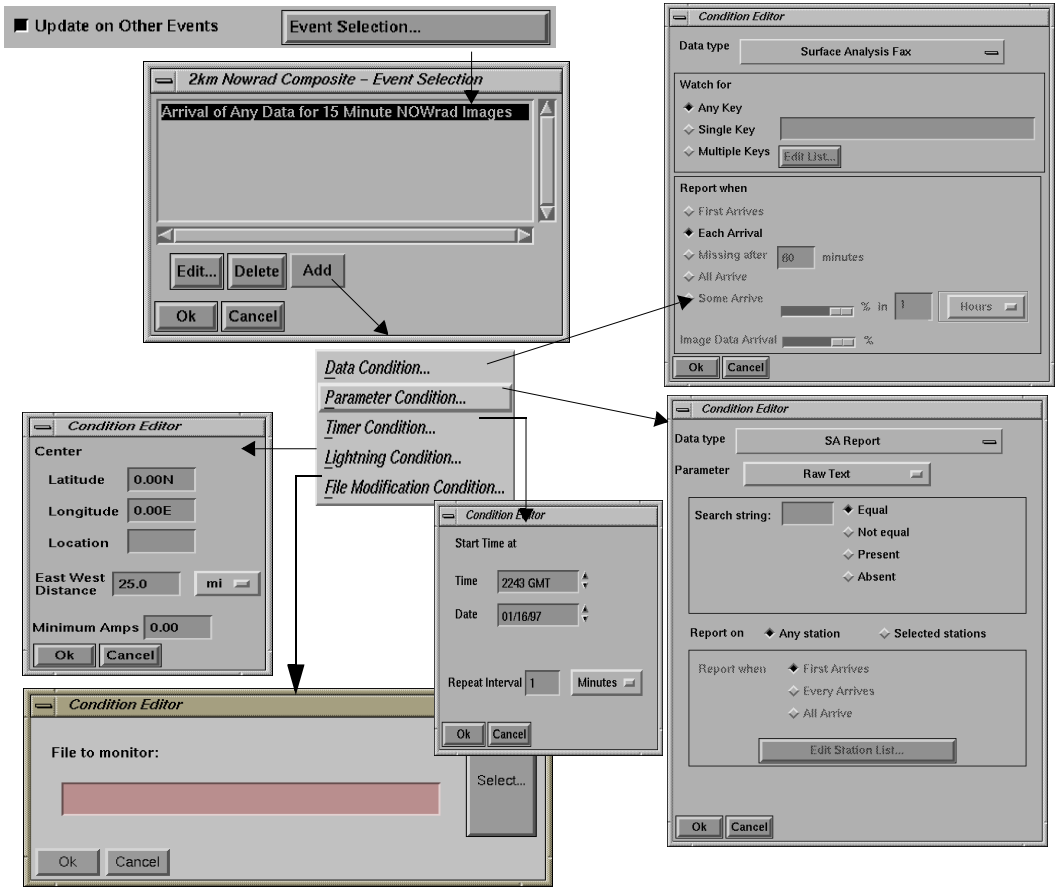
Disable Release Viewer on Close to retain the allocated memory and Motif resources associated with the built product when the product view window is closed. This is desirable in situations where the speed of opening a product is an issue.

Event handling

Event handling involves actions which occur in response to pre-defined events, events which are based on a data condition, a parameter condition, a timer condition, a lightning condition, or a file modification condition.

To establish one or more events for the current product, enable the Update on Other Events parameter in the Product Configuration window and click the Event Selection button. The Event Selection window displays. Use the Add button menu to select a condition type. Adjust the parameters in the associated condition window to tailor the event specification to the needs of your particular product.

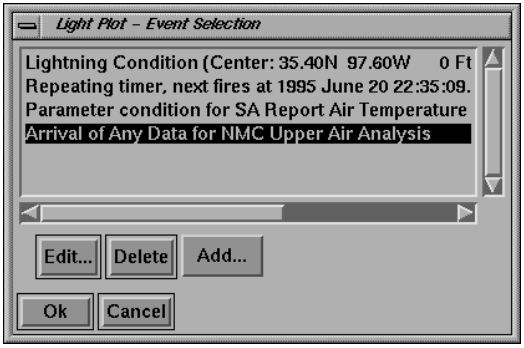
Figure 8: Event selection parameters



To edit an existing condition, select the condition in the Event Selection window, click the Edit button, and make adjustments to the resulting Condition Editor window.

To delete an existing condition, select the condition in the Event Selection window and click the Delete button.

Figure 9: Sample event conditions



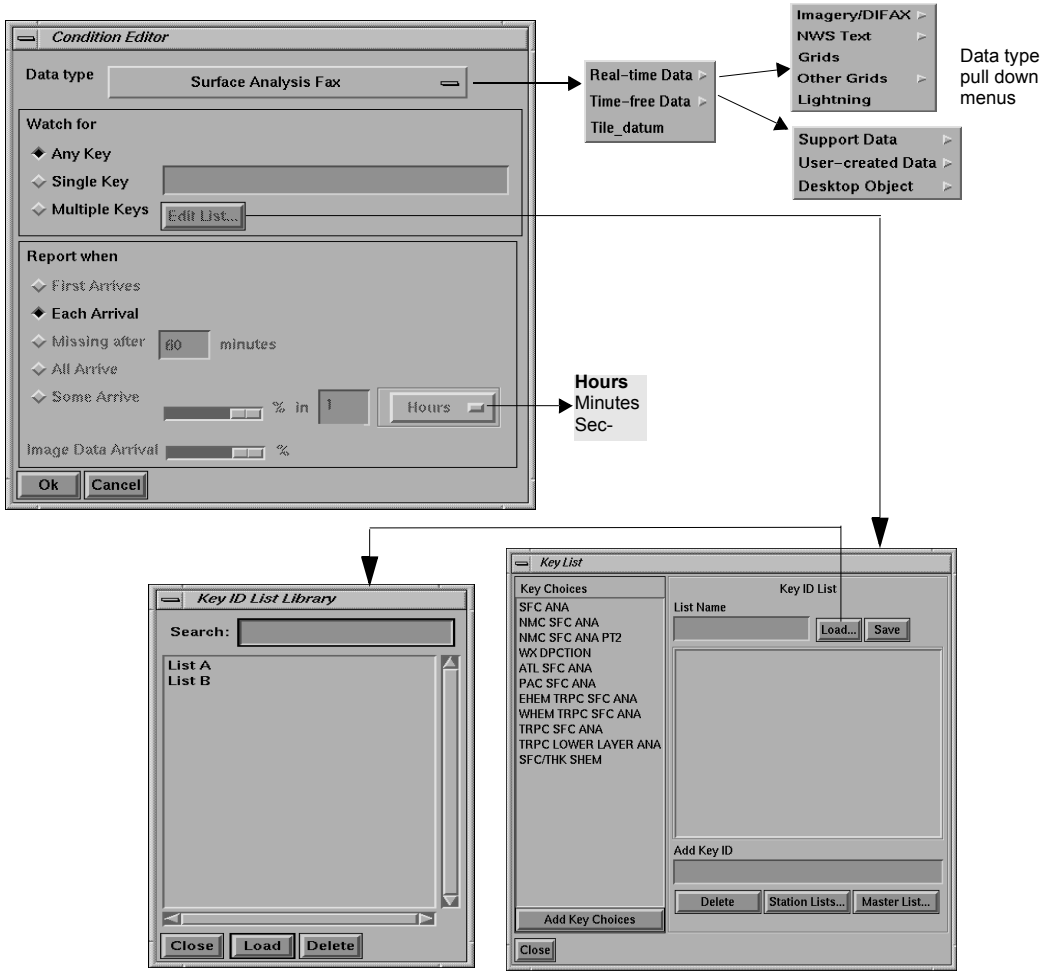
The events that trigger the Data, Parameter, and Lightning conditions are monitored by the ww_event process. This process can be run in the background to display a list of these events as they occur. Refer to the WeatherProducer Technical Reference for more information on ww_event.

The Timer and File Condition conditions are monitored locally. These events do not appear when running ww_event. To have these conditions monitored by ww_event, set the WW_LOCAL_EVENT_INTERVAL environment variable to false. Refer to the WeatherProducer Technical Reference for more information on working with environment variables.

Data condition

Use a data condition to update a product based on the type and/or instance of incoming data. To set a data condition, select Data Condition from the Event Selection window Add button menu. Select a data type from the Condition Editor window using the data type pull down menus. Choose from real-time data and time-free data. The availability of specific data types will depend on the configuration of your WeatherProducer system.

Figure 10: Data condition



Use the Watch For section of the Condition Editor window to specify all instances of the indicated data type, one particular instance of the indicated data type, or multiple instances of the indicated data type. Enter one or more known keys (e.g. station ID) to differentiate between subsets of the data type. Use the Key List window (accessed through the Edit List button) to create a new key list, to load an existing list, or to add individual keys.

Use the Report When section of the Condition Editor window to specify when to update the product when the specified event occurs. Choices vary depending on the Watch For specification.

The Watch For Any Key option offers the Each Arrives choice. The Watch For Single Key options offer three choices: First Arrives, Each Arrival, and Missing After # minutes. The Watch for Multiple Keys option offers all the choices, except Missing After.

First arrives. Updates the product as soon as the first instance of event data, with the specified data and key type, arrives into the system.

Each arrival. Updates the product each time an instance of event data, with the
specified data and key type, arrives into the system.

Missing after. Updates the product if the specified time (in minutes) elapses and *no* event data, with the specified data and key type, arrives into the system.

All arrive. Updates the product when one of each instance of event data, with the specified data and key type, arrive into the system.

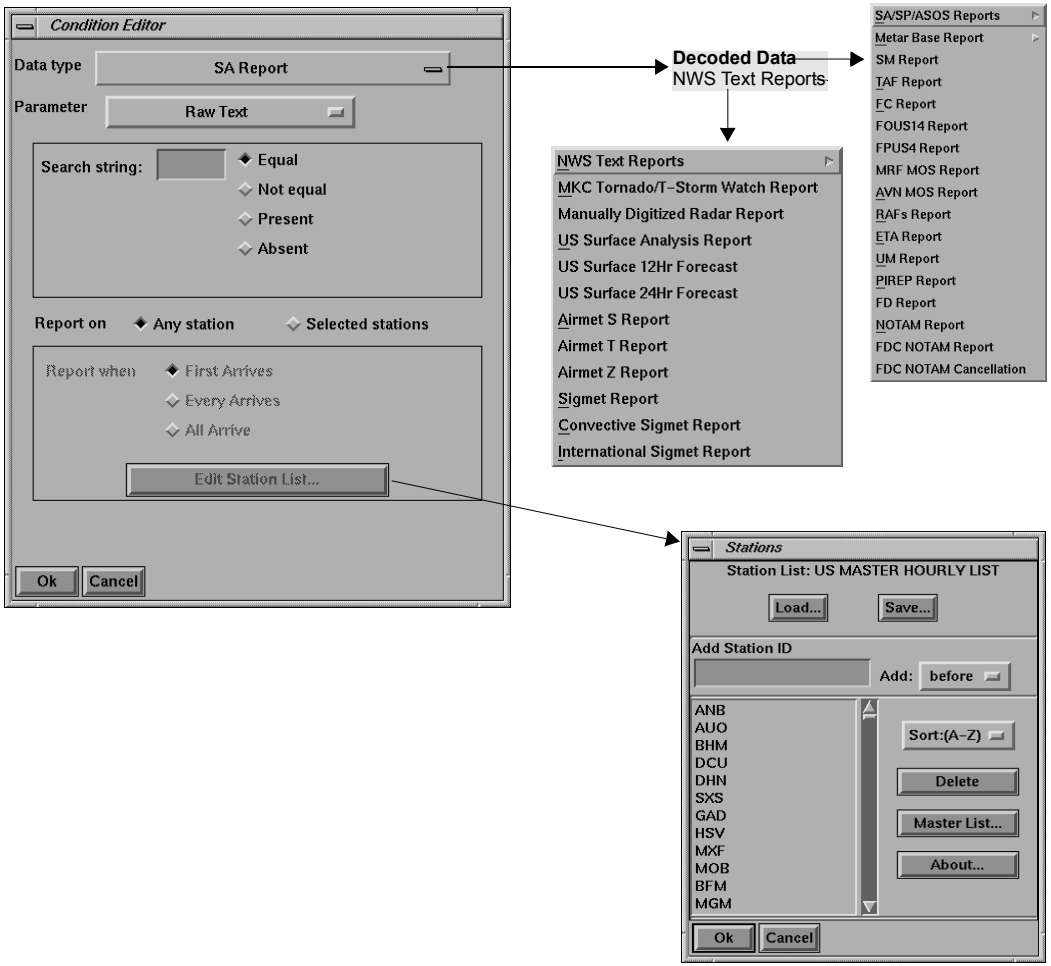
Some arrive. Updates the product when a pre-determined percentage of instances of event data, with the specified data and key type, arrive into the system within a
specified period of time. Establish a percentage using the slide bar to the right of the Some Arrive parameter; the default is 100%. Establish a time period by entering the number of hours (minutes, or seconds) into the time specification box associated with the Some Arrive parameter.

The Image Data Arrival slide bar is specific to tiled images which can take a long time to ingest due to their enormous size. Adjust the slide bar to establish how much of an incoming tiled image must have arrived before the associated event can fire off.

Parameter condition

Use a parameter condition to update a product based on a value or range of values for any single piece of information from any text bulletin or report by station ID. To add a parameter condition, select Parameter Condition from the Event Selection window Add button pull down menu and adjust the parameter settings in the Condition Editor window.

Figure 11: Parameter Condition Editor window

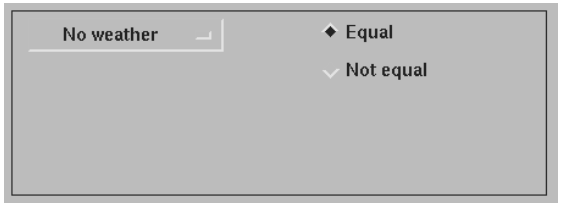


Select a data type from the data type pull down menus. The availability of specific data types will depend on the configuration of your WeatherProducer system.

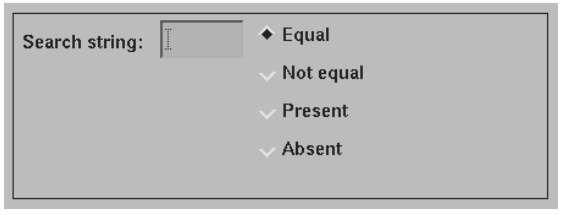
Select a data parameter from the Parameter pull down menu. Available data parameters can include (but are not limited to) raw text, temperatures, dew point, wind speed and direction, gusts, pressure, altimeter, ceiling, visibility, sky cover, snow depth, precipitation, and various weather changes data. The exact list will depend on the data type selected and on configuration. Further define your data parameter using the data parameter information input section (the boxed area just below Parameter). Note that the information requested will vary depending on the data parameter type selected: numeric, coded, or string.

Figure 12: Sample data parameter information input screens

Numeric data parameters



Coded data parameters



String data parameters

Specify whether to use reports from any station or from selected stations. If you choose selected stations, you must select an arrival parameter:

First Arrives. Updates the product as soon as the first report, with the indicated data parameter, arrives into the system.

Every Arrives. Updates the product each time a report, with the indicated data parameter, arrives into the system.

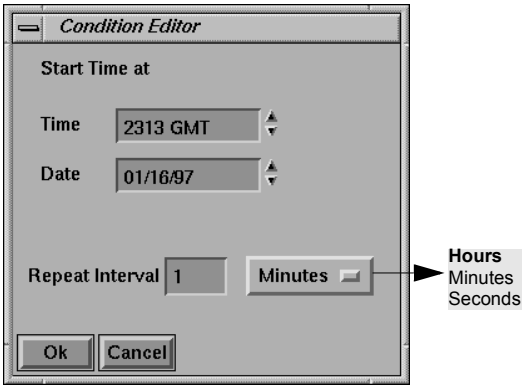
All Arrives. Waits for all station reports to arrive into the system then updates the product with data from the last report only if the data parameter specification is met.

You must also define a set of station ids by clicking on the Edit Station List button and manipulating the Station List window (for more information on the stations parameter refer to “Station parameter” on page 3).

Timer condition

Use a timer condition to update a product at pre-determined time intervals. To add a timer condition, select Timer Condition from the Event Selection window Add button pull down menu and adjust the parameter settings in the Condition Editor window. The repeat interval can be set to hours, minutes, or seconds.

Figure 13: Timer Condition Editor window

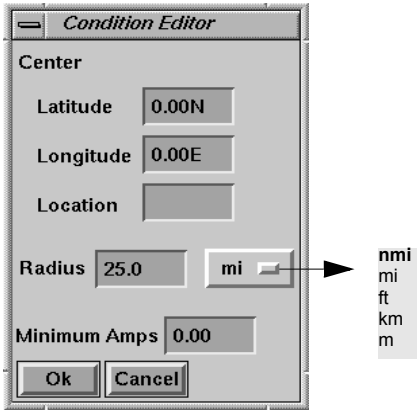


Lightning condition

Use a lightning condition to update a product when certain lightning information occurs within a specified region.

To add a lightning condition, select Lightning Condition from the Event Selection window Add button pull down menu and adjust the parameter settings in the Condition Editor window.

Figure 14: Lightning Condition Editor window



Establish a region to observe lightning conditions by first setting a centerpoint. Enter the latitude and longitude or a station or location name. Set the radius of the circular area using the Radius field.

File Modification Condition

Use a file modification condition to update a product when a specified file is modified. The condition monitors the specified file's time stamp, checking to see if the file has been modified. If the file has been modified, the product updates.

To add a file modification condition, select File Modification Condition from the Event Selection window Add button pull down menu. In the Condition Editor window click Select to open a selection window. Locate and select the file then click OK. The selected file appears in the Condition Editor window. Click OK in the Condition Editors window to set the condition.

Figure 15: File Modification Conditioner Editor window