

IRIS 8.10.4 Release Notes (8 May 2006)

These notes cover changes made in IRIS since release 8.10.3 of 13 April 2006. If you are upgrading from an earlier release, please read those notes also.

Setup Changes

1. Added a new **setup** question to the Ingest section button. Please leave the “Hydro Classification in ReIngest” question set to “Disabled”. This feature is not implemented yet. Coming soon.

Bug Repairs

1. The maximum GIF output size was raised from 1500x1100 to 5000x5000
2. Changes were made in **UfToIris** and **IrisToUf** regarding the default mapping of UF data types to IRIS data types. I show the changes here. If you are dependant on the old values the be sure to set them in your .conf files.

Iris Type	Old UF	New UF
DB_DTZ	CZ	DZ
DB_DTZC	CZ	CZ
DB_ZDR	DR	
DB_DBT	DZ	ZT
DB_LDRH	LH	
DB_LDRV	LV	
DB_PHIDP	PH	
DB_RHOHV	RH	
DB_SQI	—	SQ
DB_WIDTH	SW	
DB_VEL	VR	

3. **UfToIris** now supports RHIs. **IrisToUf** was already working with RHIs.
4. Fixed bug of not being able to make RAINN products from composited RAIN1 products.
5. Fixed a bug in the IRIS client menus introduced on Feb 10, 2006 in release 8.10.2. After using the POM, ISM or PSC menus the menu connection to the server would fail after a few minutes. This problem was introduced while fixing a crash which was happening when if making multiple selections while an update was received.
6. In release 8.10.2 we allowed **rays** and **productx** to specify extremely long line widths. This allowed us to see a new bug: These programs were not stopping when the end of the ray was reached. They continued to print data for the full specified line length. This is fixed to stop at the end of the ray if it is reached.

IRIS 8.10.3 Release Notes (13 Apr 2006)

These notes cover changes made in IRIS since release 8.10.2 of 29 March 2006. If you are upgrading from an earlier release, please read those notes also.

New Features

1. Announcing the new **Archive2ToIris** pipe which can read the NEXRAD archive2 format “.raw” files produced by the LDM software. In this first release it can only process sweeps which match format to fit in a normal IRIS task (that is not a hybrid task). Effectively this means we can only get the low few reflectivity scans. The **archive2view** utility also reads the LDM files. The source for all the archive2 programs is now in the new `utils/archive2` directory.
2. IRIS now supports conversion of lightning flash data in Vaisala UALF format into an IRIS WARN product. This allows displays overlaying lightning and radar data. The lightning data updates on a 15-second time scale which compares favorably with radar volume scans which update on more of a 5-minute time scale. Please contact Sigmet if you would like to purchase this feature.
3. The DWELL product configuration menu was enhanced for dwells of WARN product inputs. These inputs are used for airplane, bird, and lightning tracking. You can now explicitly specify the icon suffix changes as old data is dwelled in. To get the legacy behavior set the `Suffix1` to “d”, and use no `Suffix2`. The purpose of this is to allow you to show older data with a smaller icon.

Bug Repairs

1. Fixed error if `IRIS_KEYS` not defined. This could cause memory faults on many programs.
2. Cleaned up crashes caused by funny printer configurations, in **iris** menus, and other programs.
3. In the **IrisToBufr** pipe added optional WMO message length option.
4. UF data name overriding was broken for **IrisToUf**. It worked in **UfToIris**.
5. Printers were not being listed properly by `sig_lpstat` on RHEL4 Linux platforms.
6. Raised the maximum image size in IRIS from 3100x3100 to 5000x5000. The max product size remains at 3100. The main reason to do this is to support bigger underlay files.
7. In **suncal**, the azimuth beam widths were too high by $1/\cos(\text{el})$. We also added explicit display of how much the sun has moved since the calibration started.
8. Fixed a bug causing window process resize events with uninitialized size on power up. This could cause the window to crash.

IRIS 8.10.2 Release Notes (29 Mar 2006)

These notes cover changes made in IRIS since release 8.10.1 of 19 January 2006. If you are upgrading from an earlier release, please read those notes also.

Installation Changes

1. The scripts used to automatically start Sigmet programs at boot time have been moved. They are not in the `${IRIS_ROOT}/config_template/rc.d` directory, rather than the `init` directory. The installation manual is changed to match.

Data Format Changes

1. The time series archive data format now includes a field called `iNanoUTC`. This is the time in nanoseconds. Previously we only logged to the nearest millisecond

Setup Changes

1. Added a new **setup** question to the product button. In the *Product Transmission and Display* section you will see “Network Send Timeout”. This is the timeout value introduced in release 8.09.10. It turned out that a hard coded value of 60 seconds was not correct for some slow networks, so you can now set this as you wish.

Bug Repairs

1. The **real-time display** site status menu was sometimes alternating between OK and idle about once a second.
2. **Zauto** was not doing the single point calibration on noise source systems when invoked from the shell using the `-cal` option
3. The Live Action Tool in the QLW was not working on the HP-UX platform due to byte swapping problems.
4. There was a memory leak in the MAX product. Each time MAX was run on a single sweep volume scan it would abort with an informative signal, but also leave the input file open. This Bug dates back to before code was ported from FORTRAN in Feb 5, 1998 in release 6.13.
5. The IRIS Product Scheduler Menu, Ingest Sum Menu, and Product Output Menu would crash if the menu was updating while selecting multiple lines.
6. Fixed a bug in **IrisToGrib1**. It was potentially generating incorrect uninitialized error messages.
7. Ported the **iris_agl_svr** code to Linux. This is used to automatically determine the runway directions at an airport based on the Airport Ground Lighting system.

8. Fixed a bug introduced in release 8.10.1: The QLM would crash when popping down the cursor tool.
9. Fixed a bug in the **IrisToAsterix** pipe. The intended EOP message at the end of a product actually contained the SOP command.
10. Many improvements were made to **suncal**. Fixed alternating azimuth position errors. It corrects for the motion of the sun during the calibration. The output files now include a prefix based on the site code. It computes the peak power and beam width. The calculated position of the sun was off by one day. Errors will product a nicely formatted string on the error output which can be piped into the new **signal_iris**.

New Features

1. .The **UfToIris** pipe will now handle individual ray data times which come before the volume scan start time.
2. The **tsimport** utility now recovers better from a missing packet. Logging now includes the time. It will now will log a missing last packet of a ray. Many other improvements to the log.
3. The QLW cursor readout is now based on the projection map units.
4. The IRIS GIF underlay maps now fully support the new ellipsoid earth shapes and standard parallels.
5. The maximum number of icons supported in IRIS overlays and display was raised from 40 to 200.
6. Raised the maximum line width in **productx** and **rays** from 200 to 30000 characters. This is helpful when the output is piped into another program. Also fixed a bug in **productx**: on RAW products it was ignoring the command line and using a hard coded value of 85.
7. Introducing a new utility to IRIS called **signal_iris**. This program will read the standard input and signal that text to the IRIS message log. It can be used for lots of things including error output from exec tasks like **suncal**.

IRIS 8.10.1 Release Notes (19 Jan 2006)

These notes cover changes made in IRIS since release 8.10 of 11 December 2005. If you are upgrading from an earlier release, please read those notes also.

Installation Changes

1. Starting with release 8.10.1 the release media includes Tomcat 5.0. The **install** program is enhanced to include a button to install this. All existing IRIS/Web customers should upgrade to RHEL 3.0 or 4.0 and the new tomcat. Be sure to follow the new instructions in Appendix F of the Software Installation Manual. You need to install the Tomcat 5.0 first before installing the IRIS/Web.

Data Format Changes

1. To better support calibration using the sun, the following numbers were added to the `task_calib_info` and `product_end` structures:
 - IO value at calibration in dBm.
 - Noise level at calibration in dBm.
 - Radar constant in dB.
 - Receiver bandwidth in kHz (RVP8 only).

See the *IRIS Programmer's Manual* for format details. The current noise level has been recorded for many years.

Documentation Changes

1. The chapter documenting the **rtdisp** utility was moved from the *IRIS Radar Manual* to the *IRIS/RDA Utilities Manual* because **rtdisp** is supplied with both IRIS and RDA.
2. There is a new chapter in the *IRIS/RDA Utilities Manual* covering the new **suncal** utility.

Bug Repairs

1. In **BufrToIris** added support for incoming data present indicators in site lists.
2. The XSECT product was widening individual range bins which were surrounded by thresholded data by half a radial in azimuth.
3. The IRIS product configuration menu for the RAIN1 product did not allow you to select SRI input products which were not generated on the local system.
4. With all the new support for elliptical earth projections introduced in 8.10, the cursor tool in the web look window was broken. This is now fixed.

5. **Productx** was enhanced to take line width and to display a summary of data from all Cartesian products. This is printed in file units for 8-bit data only.
6. The **UfToIris** pipe now has a sweep offset feature. This allows you to input data with an initial sweep of 0 or negative.
7. *RHEL4 Platforms only:* There were bugs introduced in the OS sleep timer functions. We have made changes to make this more consistent across platforms.
8. Fixed a bug in the IRIS Ingest process. If the process crashed it was not correctly unmapping and removing all shared memory. This would usually cause the automatically restarted process to get a memory error on the next task. In the interest of fault recovery, we also changed Ingest to continue trying to run the task which just crashed.
9. The DWELL product was changed to indicate area-not-scanned for an area in which any of the inputs had missing data. Previously it would so indicate only where all inputs were missing.

New Features

1. Announcing the new **suncal** utility. This program will perform a PPI sector scan about the expected sun's position. It will make a special BEAM product from this data, then process the BEAM product to compute the antenna positioning errors and peak power. Please read about this in the *IRIS/RDA Utilities Manual*.
2. The Cross Section Tool in the Quick Look Window has a neat new feature. If you click on the middle of the cross section line, it will allow you to shift the line keeping the same orientation and length.
3. Another neat new feature of the Cross Section Tool is that if you also bring up the Cursor Tool, it will now correctly display data and position information from the cross section window.
4. The **UfToIris** pipe program is enhanced to allow adding an offset to the UF sweep numbers. For example, if your UF data starts with sweep number 0, you can now add one to all sweeps. See the UfToIris.conf file example in the config_templates directory for details.