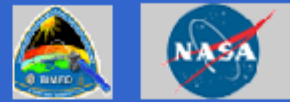
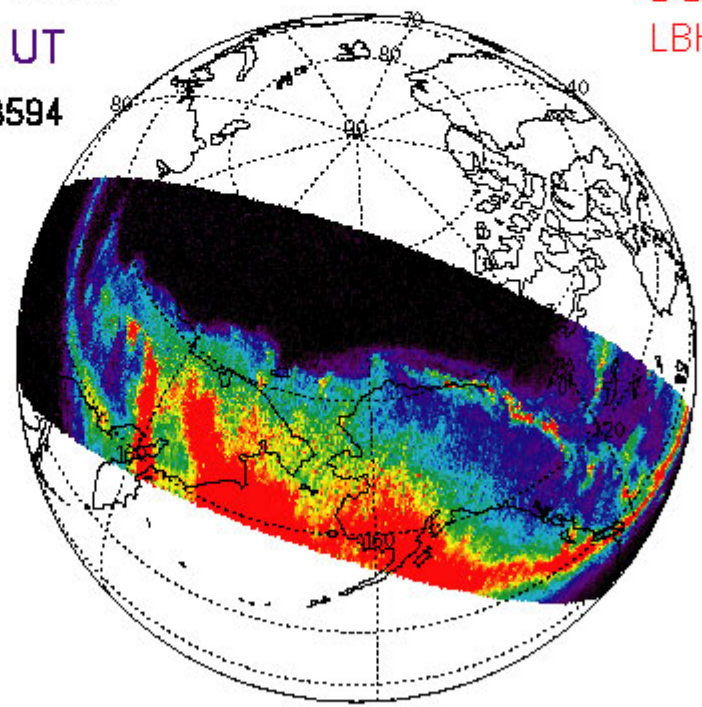


GUVI Global Ultraviolet Imager

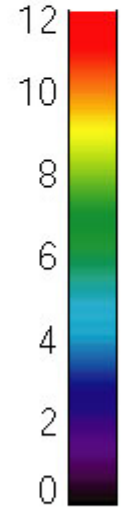


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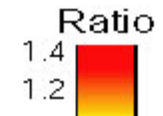
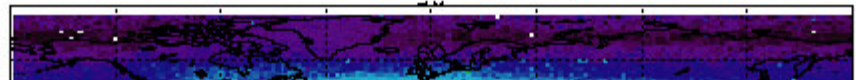
May 15, 2005
0653:00 UT
Orbit #: 18594



GUVI L1B
LBHS Data
kR



GUVI O/N₂ Ratio May 16, 2005



GUVI Global Ultraviolet Imager - Microsoft Internet Explorer provided by ITSD Department

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Address http://guvi.jhuapl.edu/about/guvi_instrument.html Go

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GUVI Global Ultraviolet Imager



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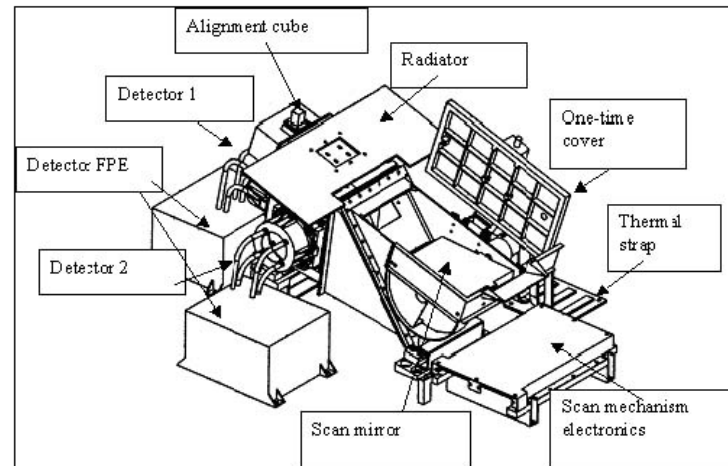
[SUMMARY IMAGES](#)

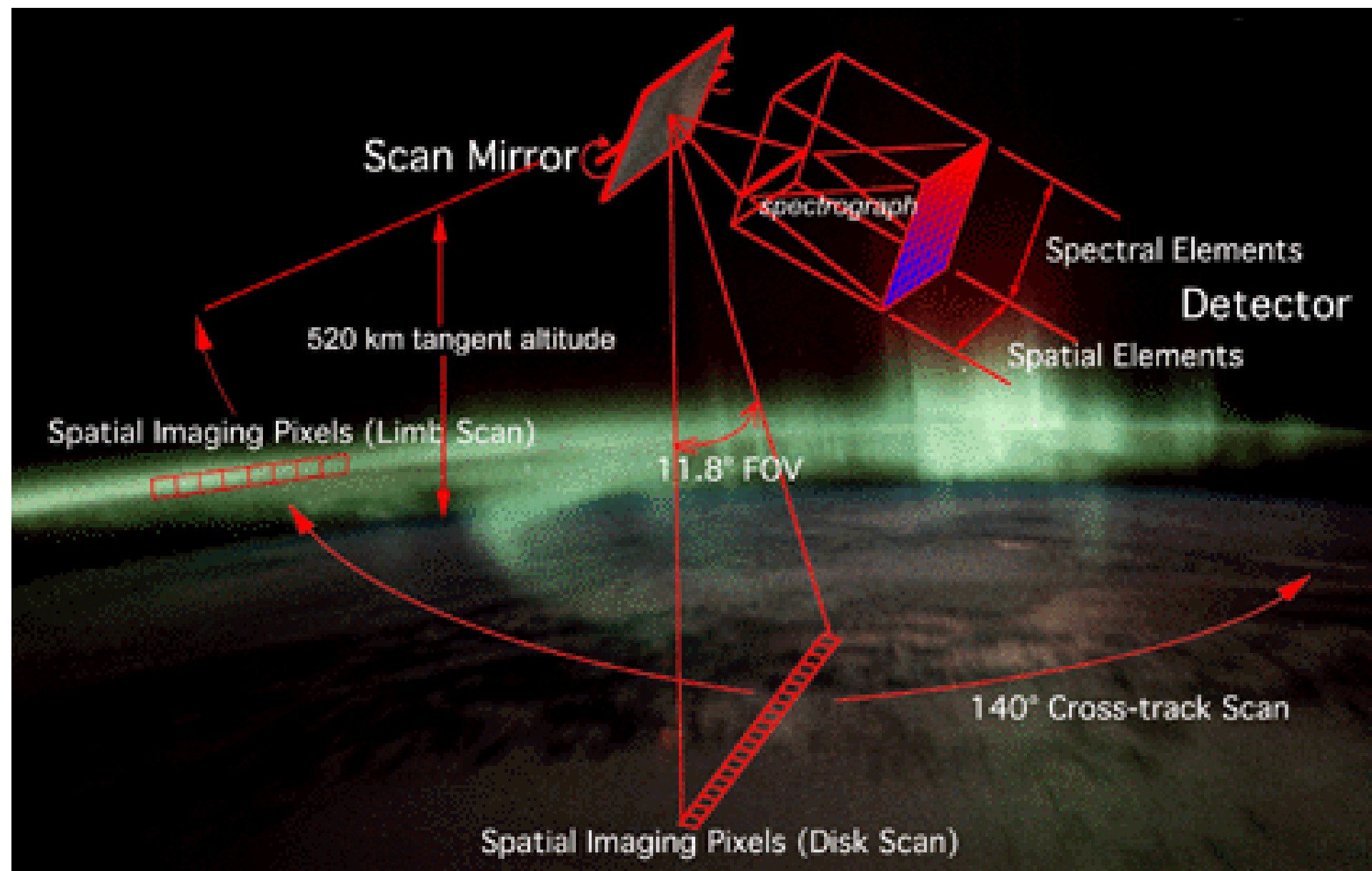
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Instrument

The GUVI instrument consists of three major functional elements: a scanning imaging spectrograph (SIS) that obtains the spectral data, a detector processor which converts information recorded at the detector into wavelength and spatial information as required, and an interface to the TIMED spacecraft. The SIS subassembly consists of a cross track scanning mirror at the input to the telescope and spectrograph optics. The spectrograph is a Rowland circle mount which gives reasonable spatial imaging quality along the entrance slit axis. Lifetime studies and experience with the SSUSI detectors indicated that it was prudent to have two detectors at the focal plane of the instrument. The actual detector to be used is determined by the location of a mirror which can be inserted into the instrument's optical path. The detectors are custom built micro-channel plate intensified wedge-and-strip anode sealed tube units.





GUVI Global Ultraviolet Imager - Microsoft Internet Explorer provided by ITSD Department

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Address http://guvi.jhuapl.edu/guvi_summaryimages.html

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GUVI Global Ultraviolet Imager

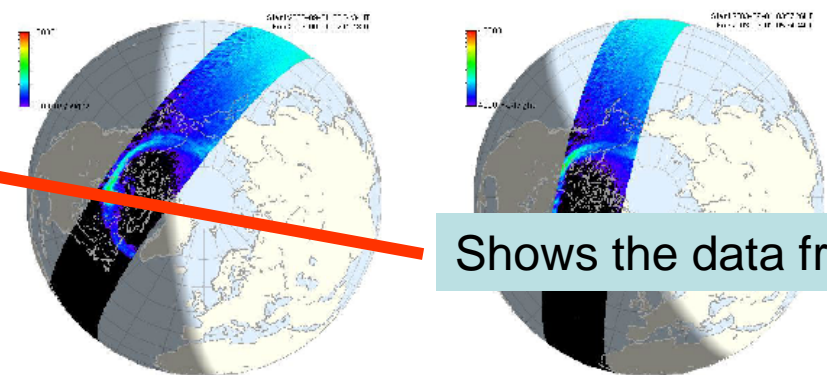


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GUVI Summary Images

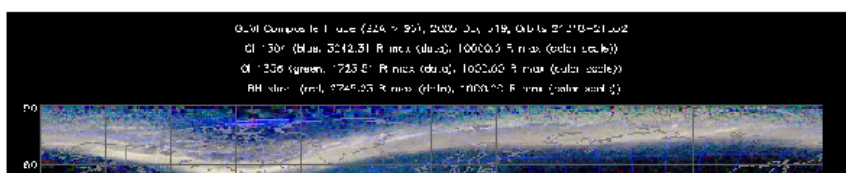
Two types of GUVI Summary Images are available for display

L1C Daily Orbit by Orbit Images



Shows the data from one orbit

Daily Summary Images



GUVI Composite 1: 08:52:11 - 08:52:11, 2000, July 19, Orbit 2746-2748
G1 - 50% (blue, 5042.31 R units, 10000.0 R max, (order 1, 1, 1))
G2 - 25% (green, 723.0 R units, 1000.0 R max, (order 1, 1, 1))
RH - 25% (red, 2746.25 R units, 1000.0 R max, (order 1, 1, 1))

This is the page to go to to look at the GUVI data in the form of images

To look at a particular day click on daily summary
you need the day of year

GUVI Global Ultraviolet Imager

HOME
OVERVIEW
EXTENDED MISSION
USING GUVI DATA
GUVI DATA PRODUCTS
SUMMARY IMAGES
L1C DAILY ORBIT BY DAY
IMAGES
DAILY SUMMARY
PUBLICATIONS
EDUCATION

Day: 2007-298
WAVELENGTHS: LBHS-1356-1304

PREVIOUS DAY NEXT DAY RETRIEVE IMAGE START SLIDE SHOW

CylinDisk_v008r00_2007298.L1B
VIEW FULL IMAGE

StripDisk_v008r00_2007298.L1B
VIEW FULL IMAGE

Tools are on this page – can use these to calculate orbit number, day of year, etc

GUVI Global Ultraviolet Imager

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Understanding GUVI Data Products

The GUVI Data Processing Payload Operations Center will routinely create scientific data products that are available for distribution via the web. In order for the data to be of use to scientists, industry and the public, rapid, efficient, and accurate operational algorithms must be developed into environmental parameters. Data from the GUVI instrument is processed on the ground to generate data products at the different levels.

GUVI DATA LEVELS	
Data Level	Brief Description
1A	time and position tagged data
1B	calibrated and geolocated
1C	binned in GUVI coordinates
2B	routine key parameters
3	multiple orbits
4	higher level analysis

Level 1A is a "virtual" data product file in the sense that the data is not directly outputted to a data file. It consists of raw sensor data at full resolution. Level 1B is also a "virtual" data product file and it contains uncompressed instrument data, using a simple constrained maximum error compression algorithm that achieves modest compression factors, and has been calibrated to convert to units of radiance within the specified "color" of the GUVI data (Rayleighs/color).

Click on the “planning tools” link to get here

The screenshot shows a Microsoft Internet Explorer browser window displaying the GUVI website. The browser's address bar shows the URL: http://guvi.jhuapl.edu/aboutdata/guvi_planningtool.html. The website header features the GUVI logo and NASA logo. A navigation menu on the left includes links for HOME, OVERVIEW, EXTENDED MISSION, USING GUVI DATA, GUVI DATA PRODUCTS, SUMMARY IMAGES, PUBLICATIONS, and EDUCATION. The main content area is titled "GUVI CALENDAR" and includes a sub-header "GUVI Calendar | Orbit Number Calculator | TIMED Coincidence Calculator | TIMED Orbit Plotter". Below this, there is a description: "Provide details of what the GUVI instrument was doing or will be doing." and a table of monthly links for the years 2001 through 2007. The table has columns for each month (Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec) and rows for each year. The "Dec" column for 2001 is highlighted. Below the table, there is a section titled "DAY OF YEAR CALENDAR" with the text "Convert between day of year to month and day for leap years and non-leap years." and a link for "Non-Leap Year".

GUVI Global Ultraviolet Imager

[GUVI Calendar](#) | [Orbit Number Calculator](#)
[TIMED Coincidence Calculator](#) | [TIMED Orbit Plotter](#)

GUVI CALENDAR

Provide details of what the GUVI instrument was doing or will be doing.

2001											Dec	
2002	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2003	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2004	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2005	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2007	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

DAY OF YEAR CALENDAR

Convert between day of year to month and day for leap years and non-leap years.

[Non-Leap Year](#)

The GUVI calendar tells you if we were in a different mode on a particular day or if there was a spacecraft event.

Clicked on “orbit number calculator”

The screenshot shows a Microsoft Internet Explorer browser window titled "GUVI Global Ultraviolet Imager - Microsoft Internet Explorer provided by ITSD Department". The address bar shows the URL: http://guvi.jhuapl.edu/science/planning/guvi_orbitnumber.html. The browser's toolbar includes standard navigation buttons (Back, Forward, Stop, Refresh, Home, Search, Favorites, Print, Stop, Close) and a search box. Below the toolbar, there are links to "CNN Live Feed", "Modify Password", "Timekeeping Web page", and "Windows Marketplace". The main content area features the GUVI logo and navigation links: [HOME](#), [OVERVIEW](#), [EXTENDED MISSION](#), [USING GUVI DATA](#), [USER'S GUIDE](#), [DATA DEFINITION](#), [ALGORITHMS](#), [SOFTWARE](#), [VERSIONS](#), [PLANNING TOOLS](#), [GUVI DATA PRODUCTS](#), [SUMMARY IMAGES](#), [PUBLICATIONS](#), and [EDUCATION](#). The main content area is titled "GUVI Orbit Number Calculator" and contains the following text: "This calculator can be used to compute GUVI orbit number of a specified time, or vice versa. (See [Installation Guide](#) for more information)". Below this text is a form with the following fields: "Last Orbit: 31891, (2007-10-28 18:57:48 doy=301)", "Date: 2002 - 01 - 01", "Time: 00 : 00 : 00", "DOY: 001 Orbit: 00000", "Altitude For Conversions (km): 150", "Latitude: 0", "Longitude: 0", "Magnetic Latitude: 0 Dip Latitude: 0", "Magnetic Longitude: 0", "Altitude: 0", and "MLT: ". The browser's status bar at the bottom shows "Applet OrbitApplet started" and "Internet".

Entered the date and clicked at bottom of screen to convert to day of year “doy”

GUVI Orbit Number Calculator

This calculator can be used to compute GUVI orbit number of a specified time, or vice versa.
(See [Installation Guide](#) for more information)

Last Orbit: 31891, (2007-10-28 18:57:48 doy=301)

Date: 2004 - 11 - 10

Time: 0 : 0 : 0

DOY: 315 Orbit: 15831

Altitude For Conversions (km): 150

Latitude: -70.922

Longitude: 327.046

Magnetic Latitude: -57.636 Dip Latitude: -42.195

Magnetic Longitude: 26.517

Altitude: 642.421

MLT: 17.078

Solar Zenith Angle: 90.093

Solar Local Time (Start Of Orbit): 1 : 45 : 43

Solar Local Time (Sub-Satellite Point): 22 : 4 : 26

DOY -> date & orbit | date -> DOY & orbit | orbit -> date & DOY

Now we know that it was day 315

Find the day of year and year on the scroll bar and click on “retrieve image” to see a summary

The screenshot displays the GUVI (Global Ultraviolet Imager) website interface within a Microsoft Internet Explorer browser window. The browser title is "GUVI Image Galleries : LEVEL 1B DAILY SUMMARY GALLERY - Microsoft Internet Explorer provided by ITS Department". The address bar shows the URL "http://guvi.jhuapl.edu/gallery/gallery/nugallery.cgi".

The website header includes the GUVI logo and the text "Global Ultraviolet Imager", along with NASA and ESA logos. A navigation menu on the left lists various sections: HOME, OVERVIEW, EXTENDED MISSION, USING GUVI DATA, GUVI DATA PRODUCTS, SUMMARY IMAGES, PUBLICATIONS, and EDUCATION. The "SUMMARY IMAGES" section is expanded to show "L1C DAILY ORBIT BY ORBIT IMAGES" and "DAILY SUMMARY".

The main content area features a search interface with a "Day" dropdown set to "2004-315" and "WAVELENGTHS" set to "LBHS-1356-1304". Navigation buttons include "PREVIOUS DAY", "NEXT DAY", "RETRIEVE IMAGE", and "START SLIDE SHOW".

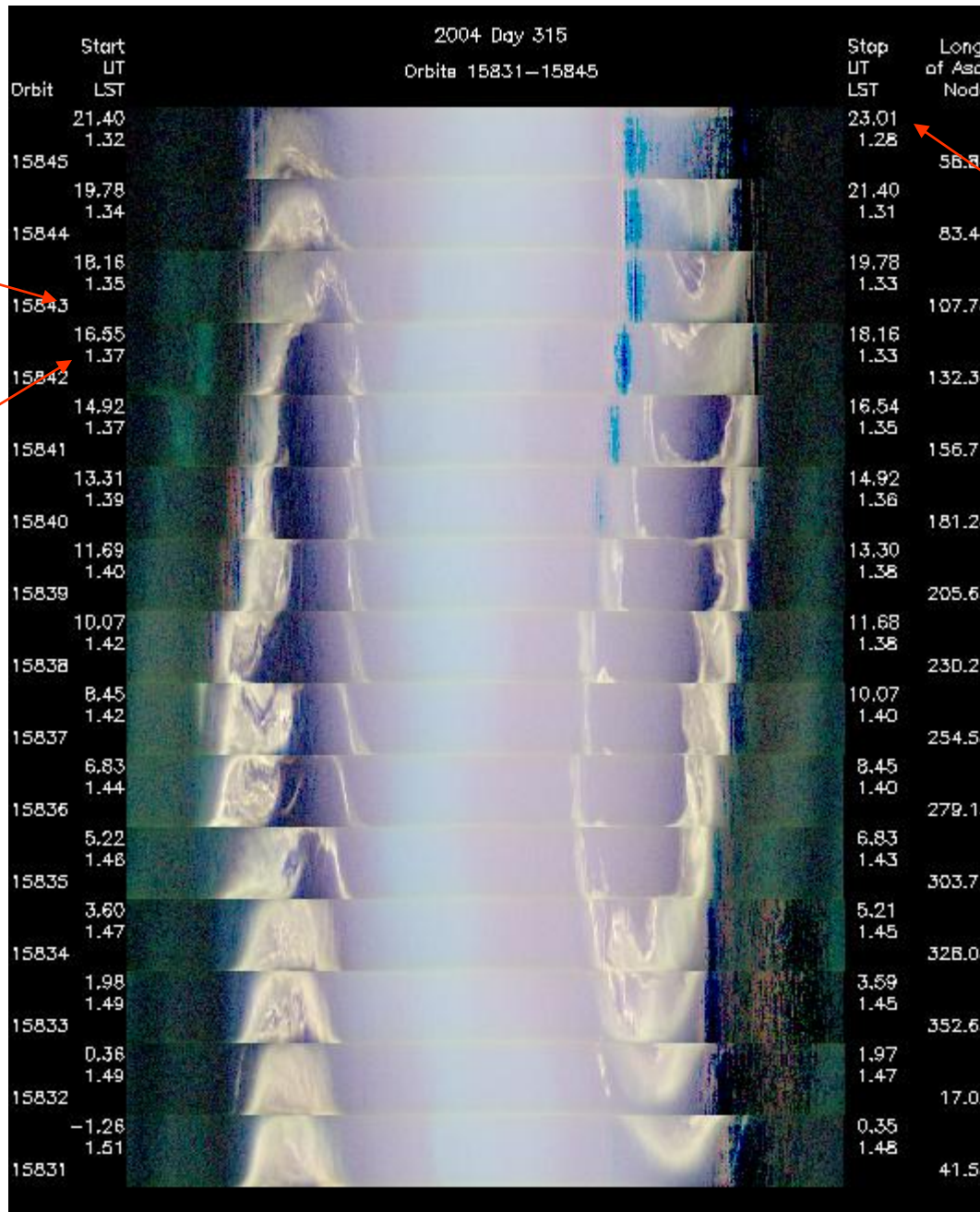
The central image is titled "CylinDisk_v008r00_2004315.L1B" and shows a global map with a red line indicating the satellite's orbit. Below the map is another section titled "StripDisk_v008r00_2004315.L1B" with a "VIEW FULL IMAGE" button.

The browser's status bar at the bottom shows "Done" and "Internet".

Scroll down to the disk summary and click to see the larger version of the image

2004 Day 315
Orbite 15831-15845

Orbit	LST	Stop UT LST	Long. of Asc. Node
15845	19.78 1.34	21.40 1.28	58.84
15844	18.18 1.35	19.78 1.33	83.41
15843	16.85 1.37	18.16 1.33	107.78
15842	14.92 1.37	16.54 1.35	132.34
15841	13.31 1.39	14.92 1.36	156.71
15840	11.69 1.40	13.30 1.36	181.28
15839	10.07 1.42	11.68 1.36	205.65
15838	8.45 1.42	10.07 1.40	230.21
15837	6.83 1.44	8.45 1.40	254.58
15836	5.22 1.46	6.83 1.43	279.15
15835	3.60 1.47	5.21 1.45	303.71
15834	1.98 1.49	3.59 1.45	328.08
15833	0.36 1.49	1.97 1.47	352.65
15832	-1.26 1.51	0.35 1.48	17.02
15831			41.58



Universal time at the ascending node
Or start of the orbit

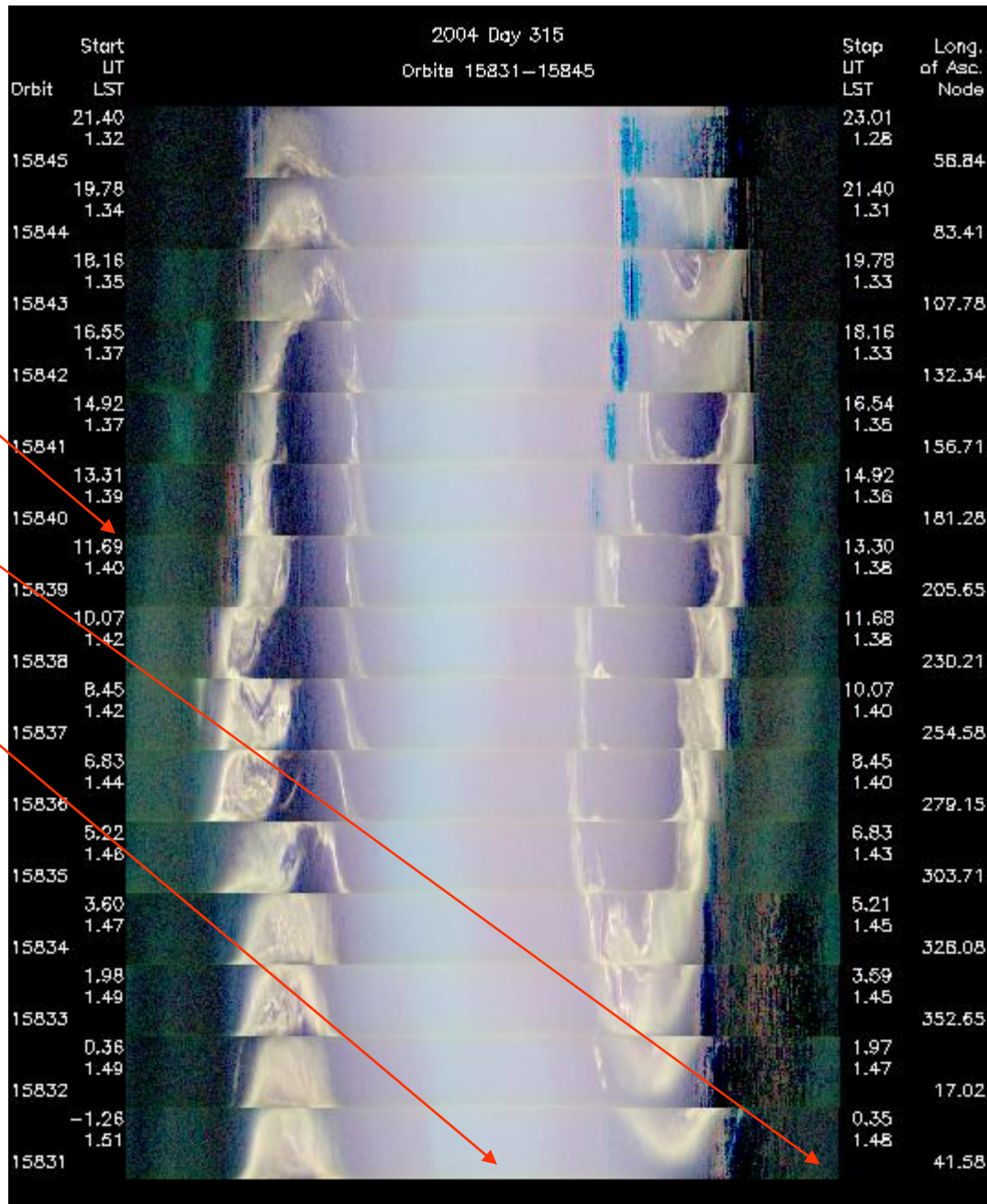
Universal time at the end of the orbit

Local time at start of orbit

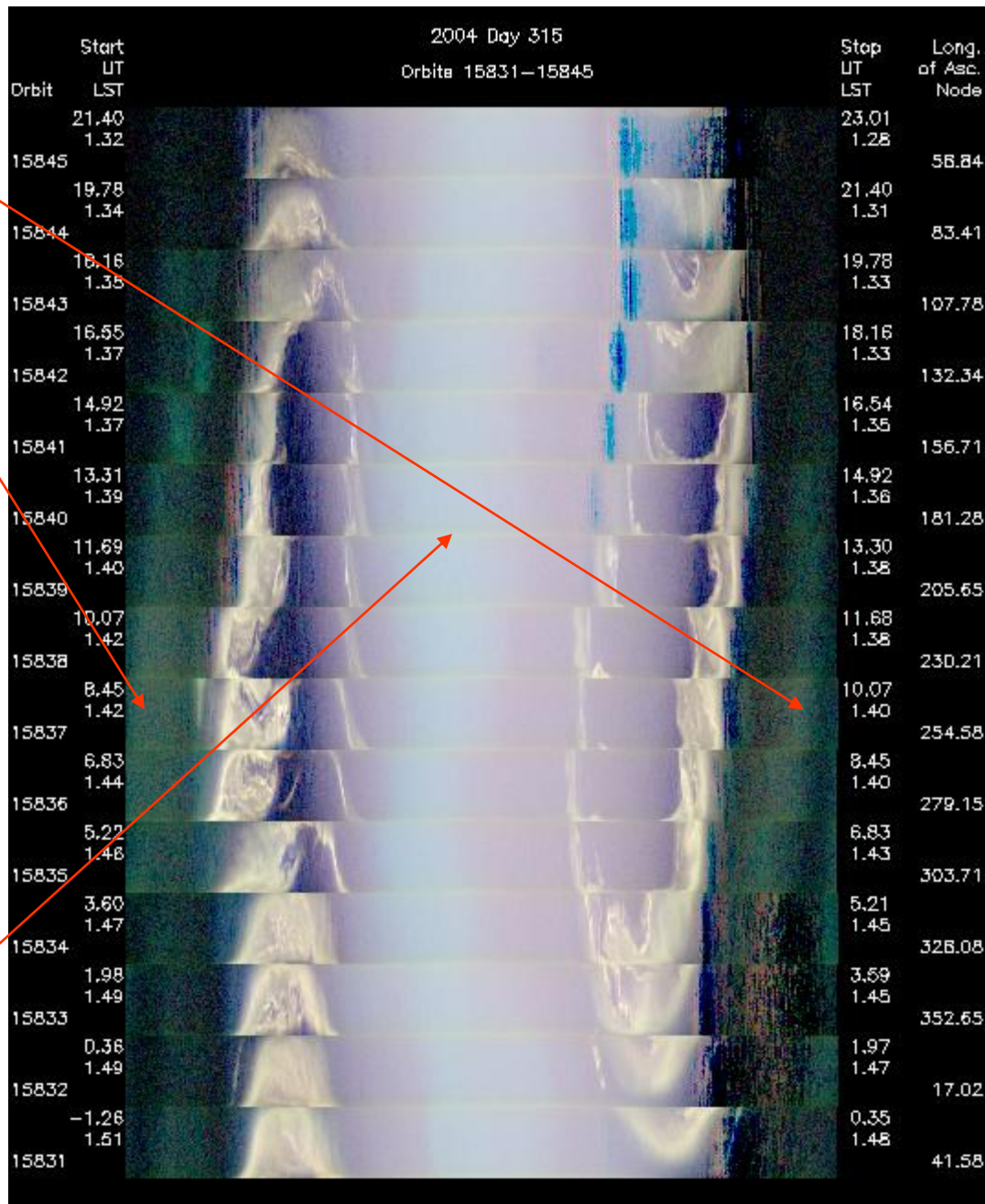
Longitude of the ascending node

Orbit number

Geographic
equator



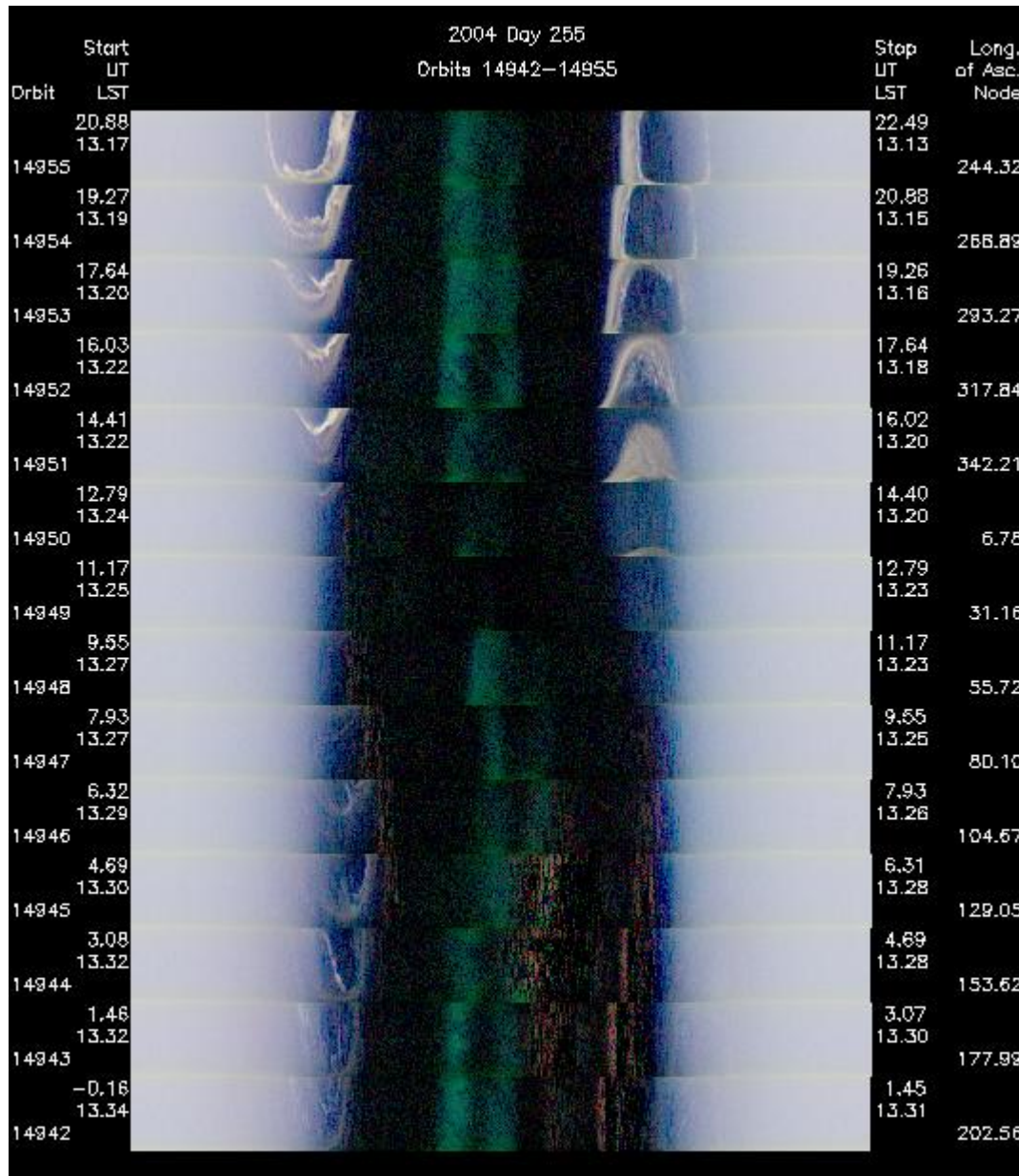
night

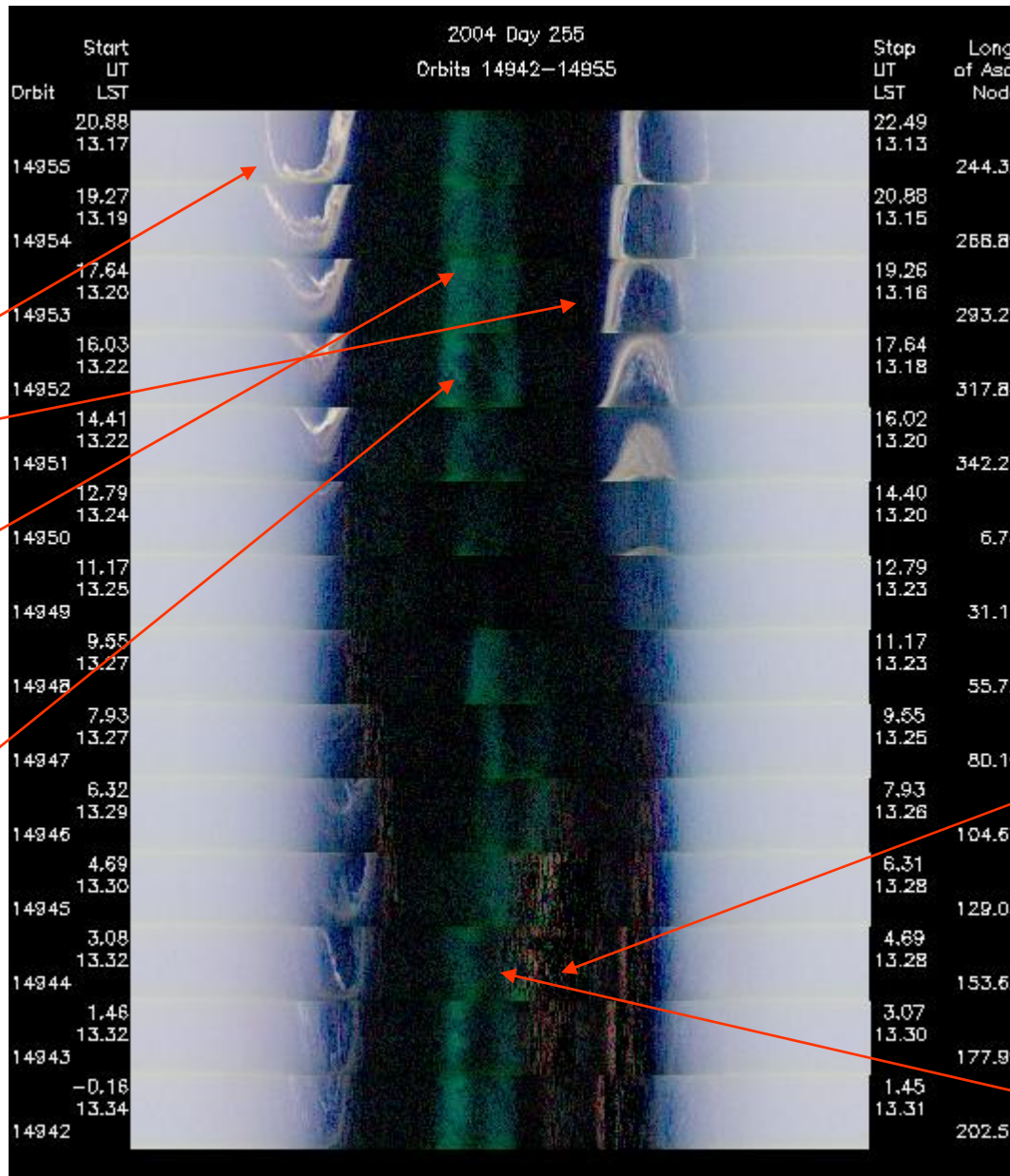


It just so happens that the ascending node was on the nightside on this orbit

day

Here's an image 60 days earlier that is for the same local solar time – but the ascending node was on the dayside





aurora

arcs

bubbles

Noise from the SAA

The nightside 135.6 nm intensity is proportional to the electron density squared...

North

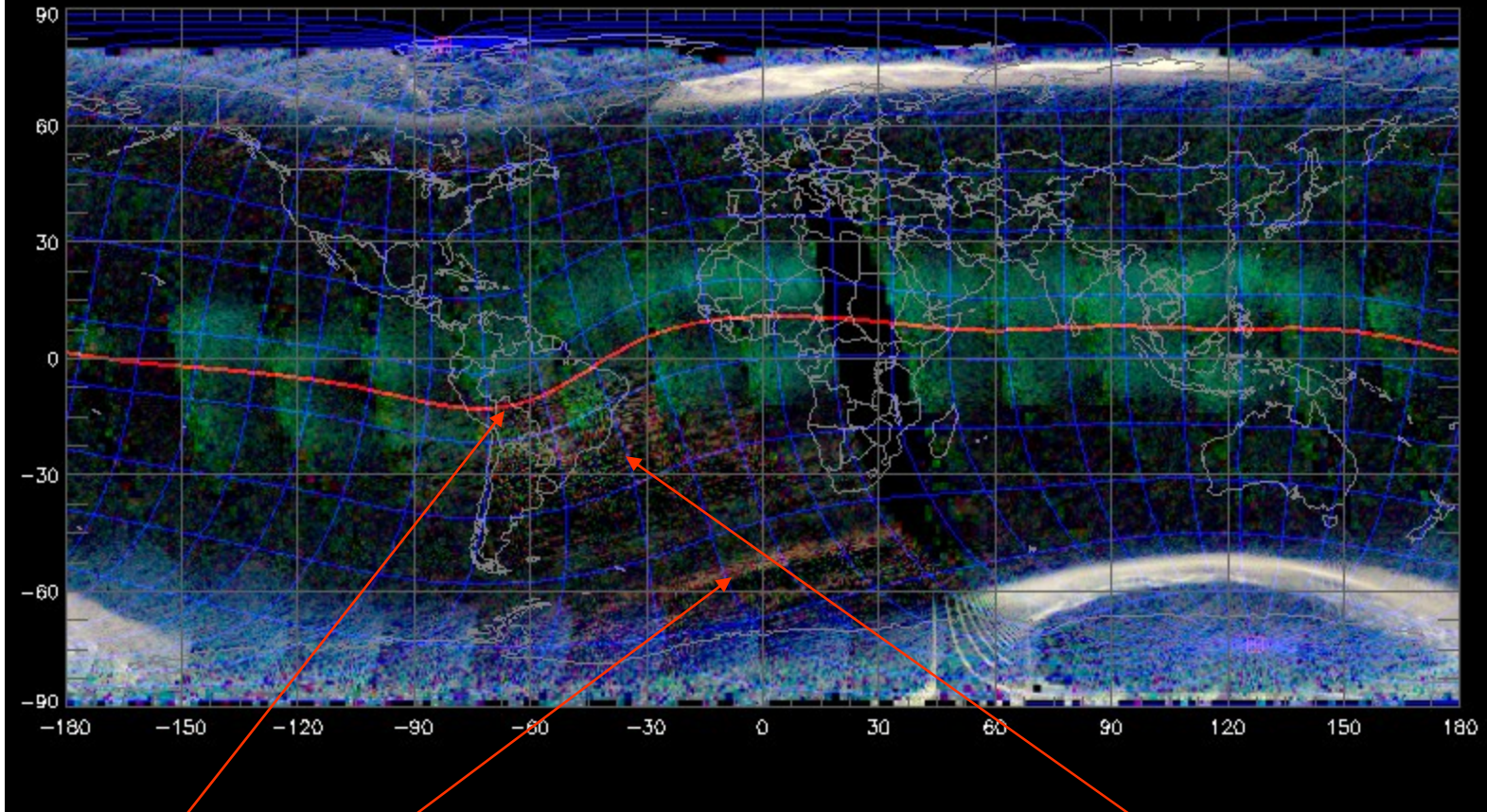
South

GUVI Composite Image (SZA > 95), 2004 Day 255, Orbits 14942-14955

OI 1304 (blue, 5714.99 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 2591.80 R max (data), 1000.00 R max (color scale))

LBH short (red, 3191.76 R max (data), 1000.00 R max (color scale))

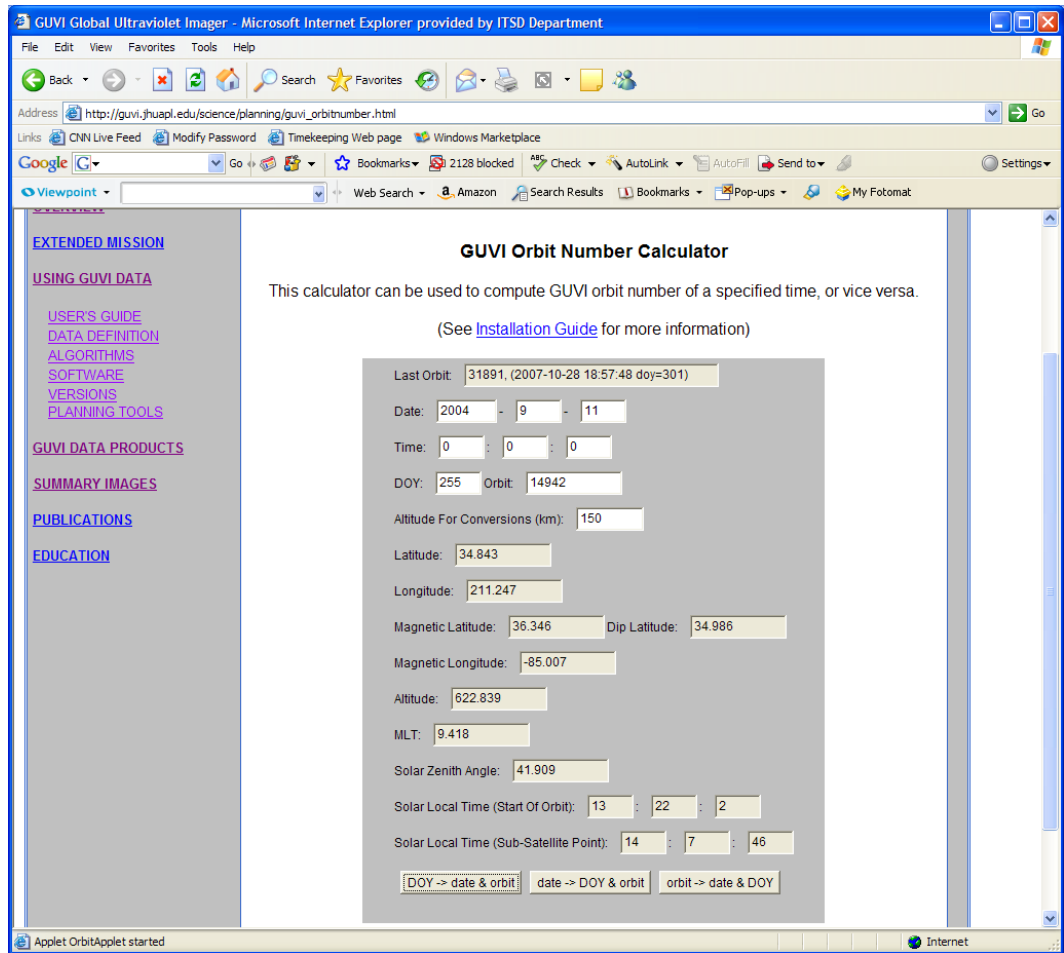


SAA

Radiation belt particles causing instrument noise

Bubbles visible?

We went back to the tool to see what day 255 was in terms of date – it was September 11





Use this to see the time history of data during the day

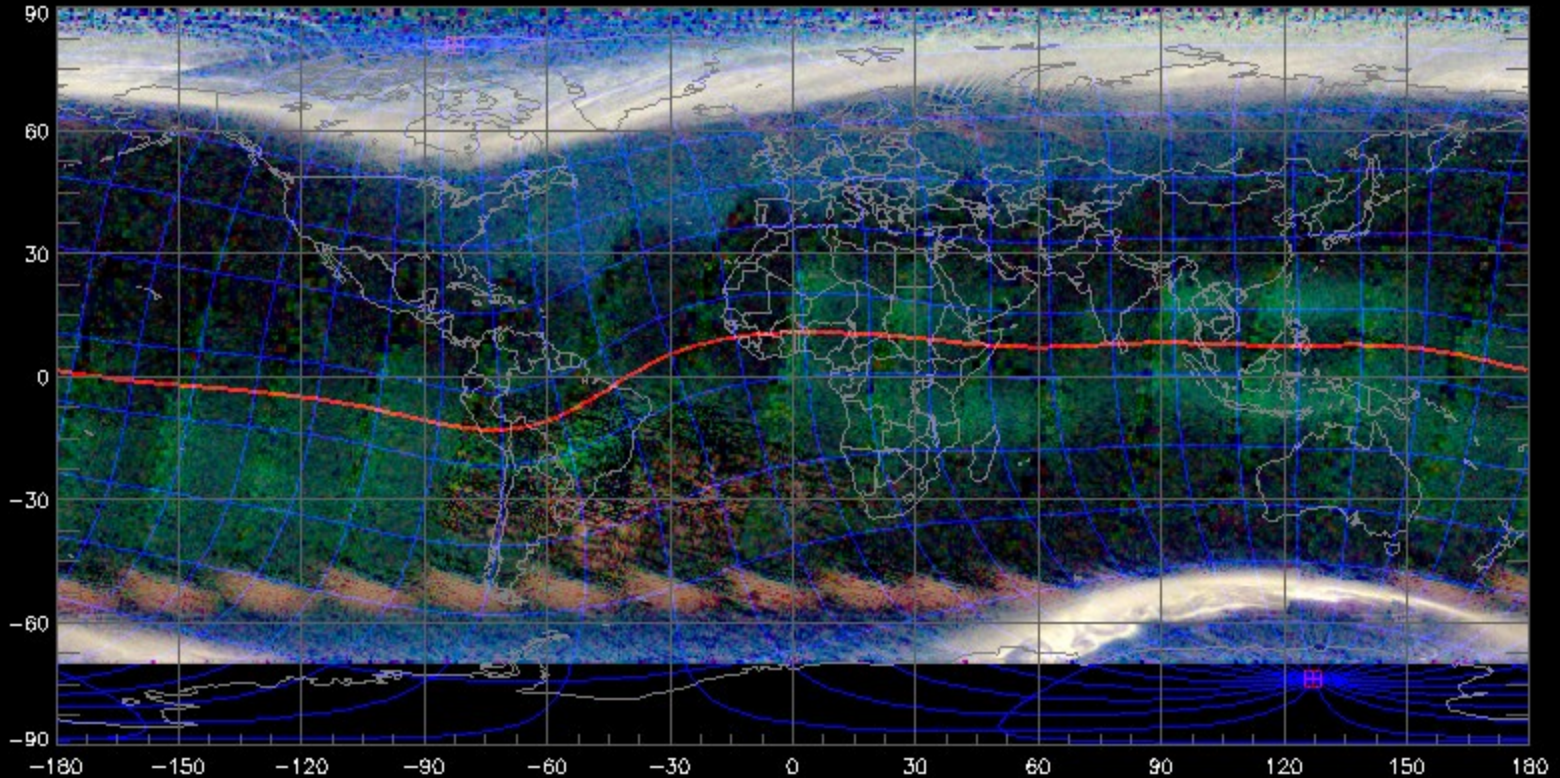
Glint is a reflection off a surface on the spacecraft and appears just at particular local times and solar zenith angles – because of this it appears as a straight line

GUVI Composite Image (SZA > 95), 2004 Day 309, Orbits 15742-15756

OI 1304 (blue, 8290.55 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 4060.08 R max (data), 1000.00 R max (color scale))

LBH short (red, 6075.68 R max (data), 1000.00 R max (color scale))



← First half of the day

← Second half of day

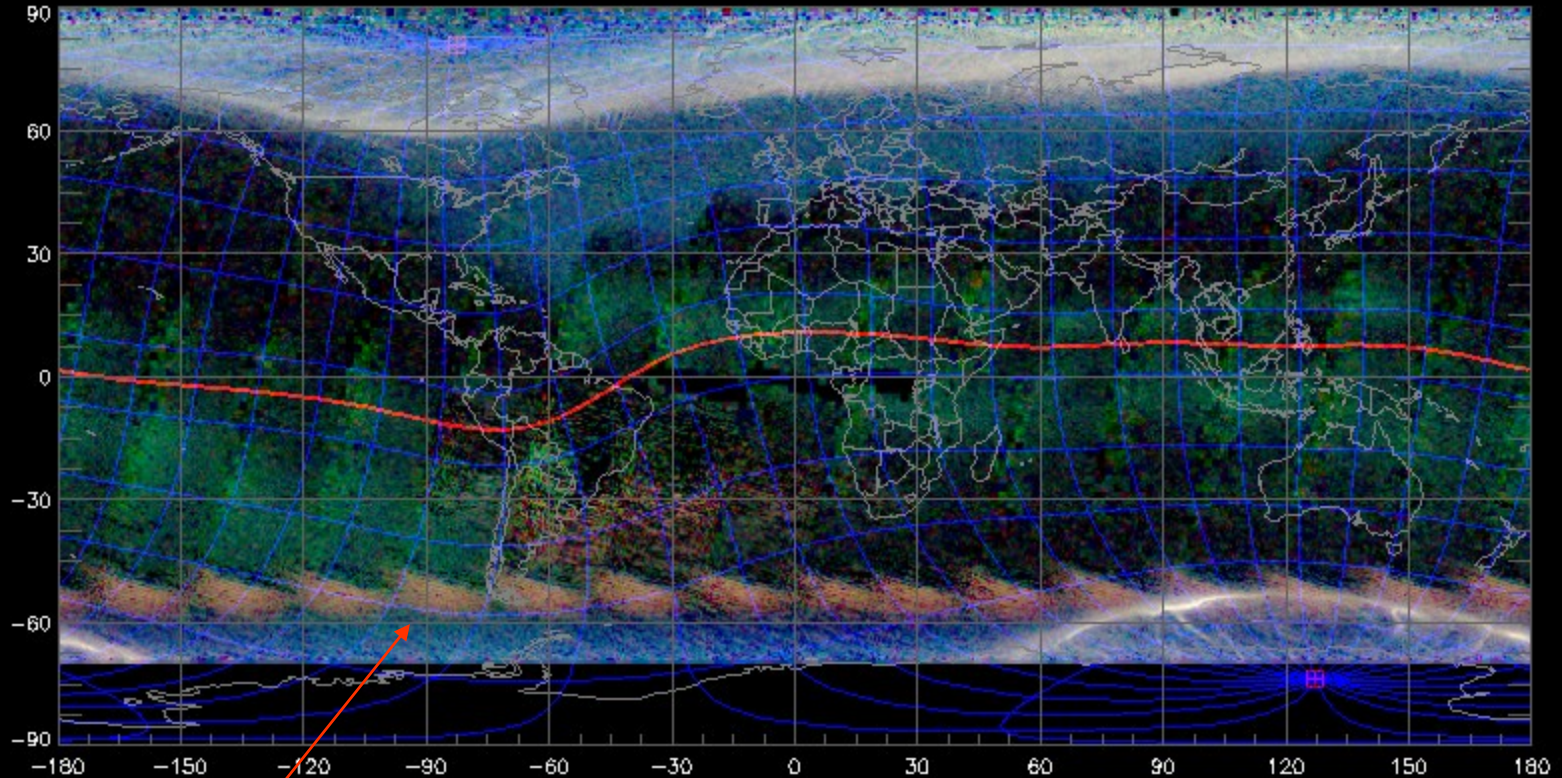
UT increases towards the left

GUVI Composite Image (SZA > 95), 2004 Day 310, Orbits 15757-15771

OI 1304 (blue, 4920.67 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 2322.16 R max (data), 1000.00 R max (color scale))

LBH short (red, 3559.71 R max (data), 1000.00 R max (color scale))



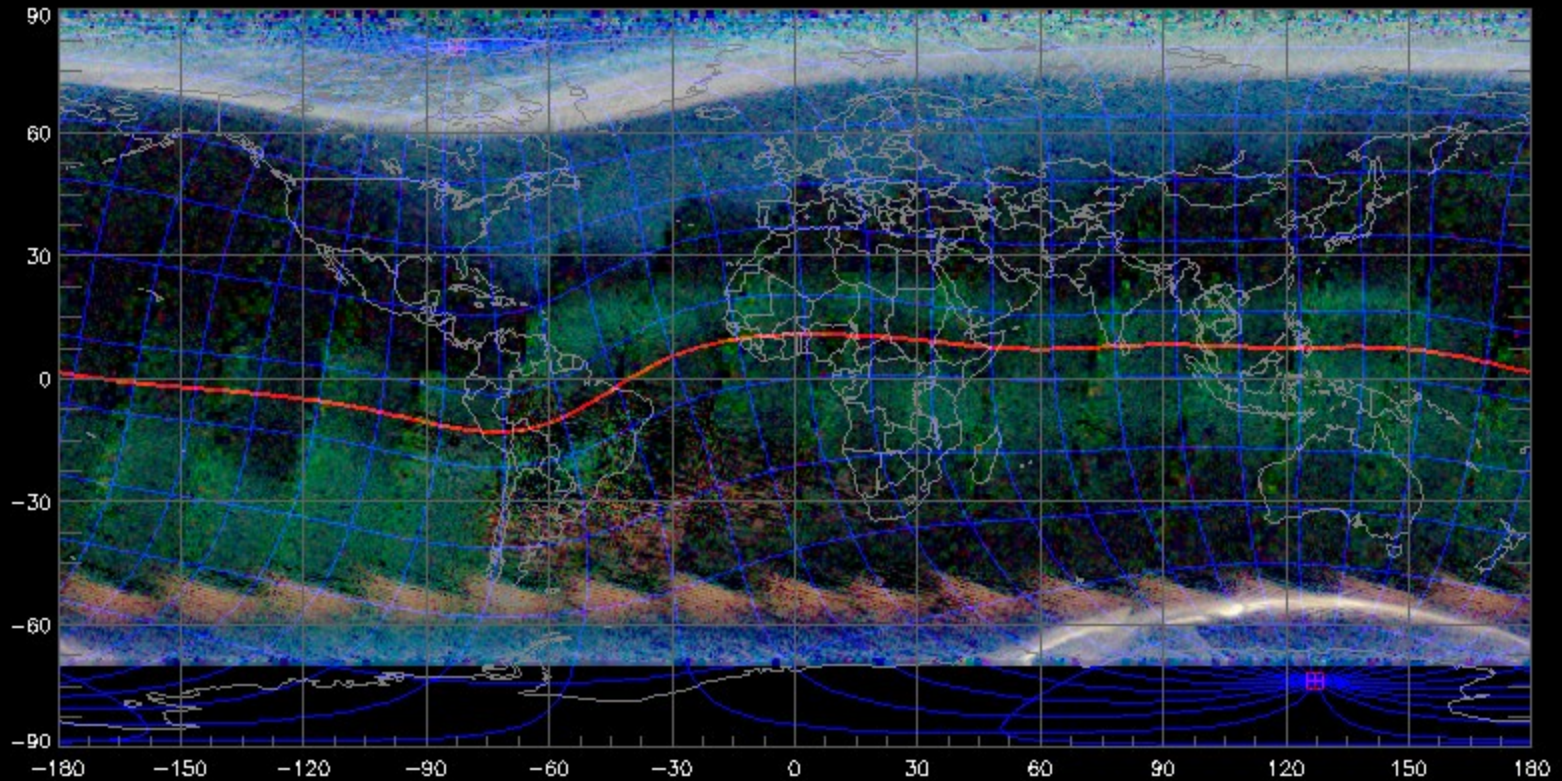
Glint doesn't follow the aurora

GUVI Composite Image (SZA > 95), 2004 Day 311, Orbits 15772-15786

OI 1304 (blue, 3361.89 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 1890.87 R max (data), 1000.00 R max (color scale))

LBH short (red, 2401.15 R max (data), 1000.00 R max (color scale))

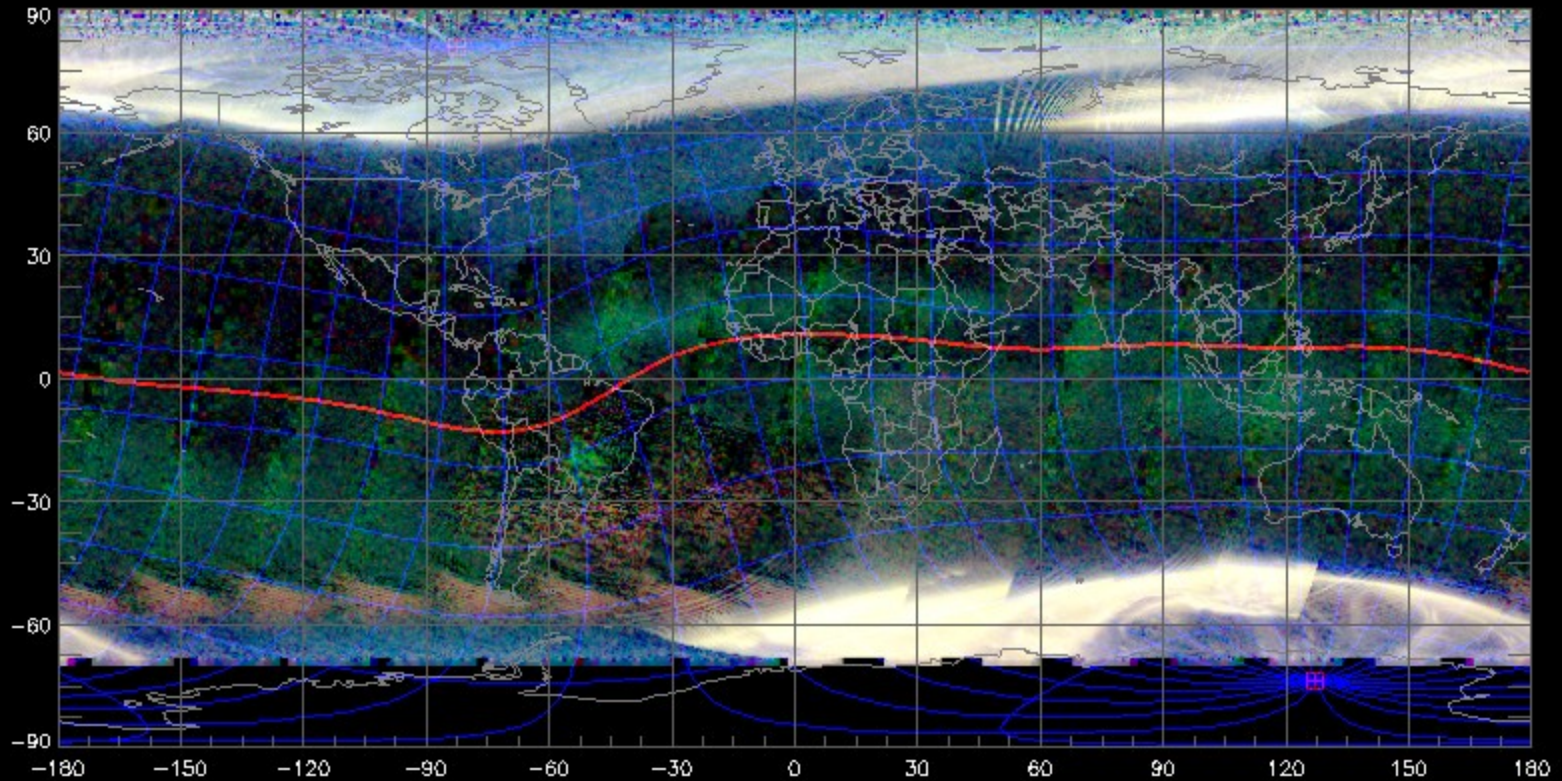


GUVI Composite Image (SZA > 95), 2004 Day 312, Orbits 15787-15801

OI 1304 (blue, 15519.6 R max (data), 10000.0 R max (color scale))

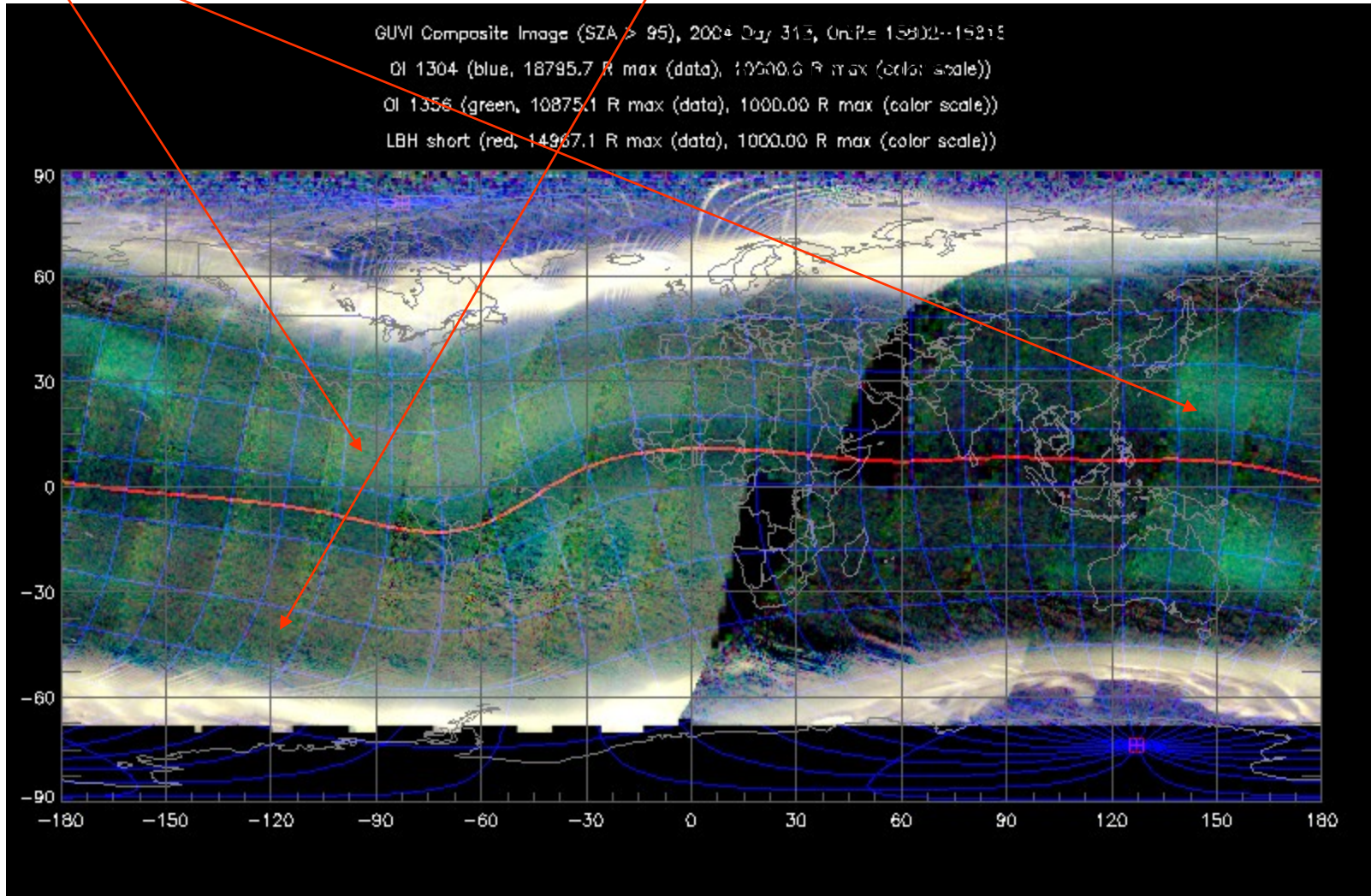
OI 1356 (green, 4650.69 R max (data), 1000.00 R max (color scale))

LBH short (red, 5795.56 R max (data), 1000.00 R max (color scale))

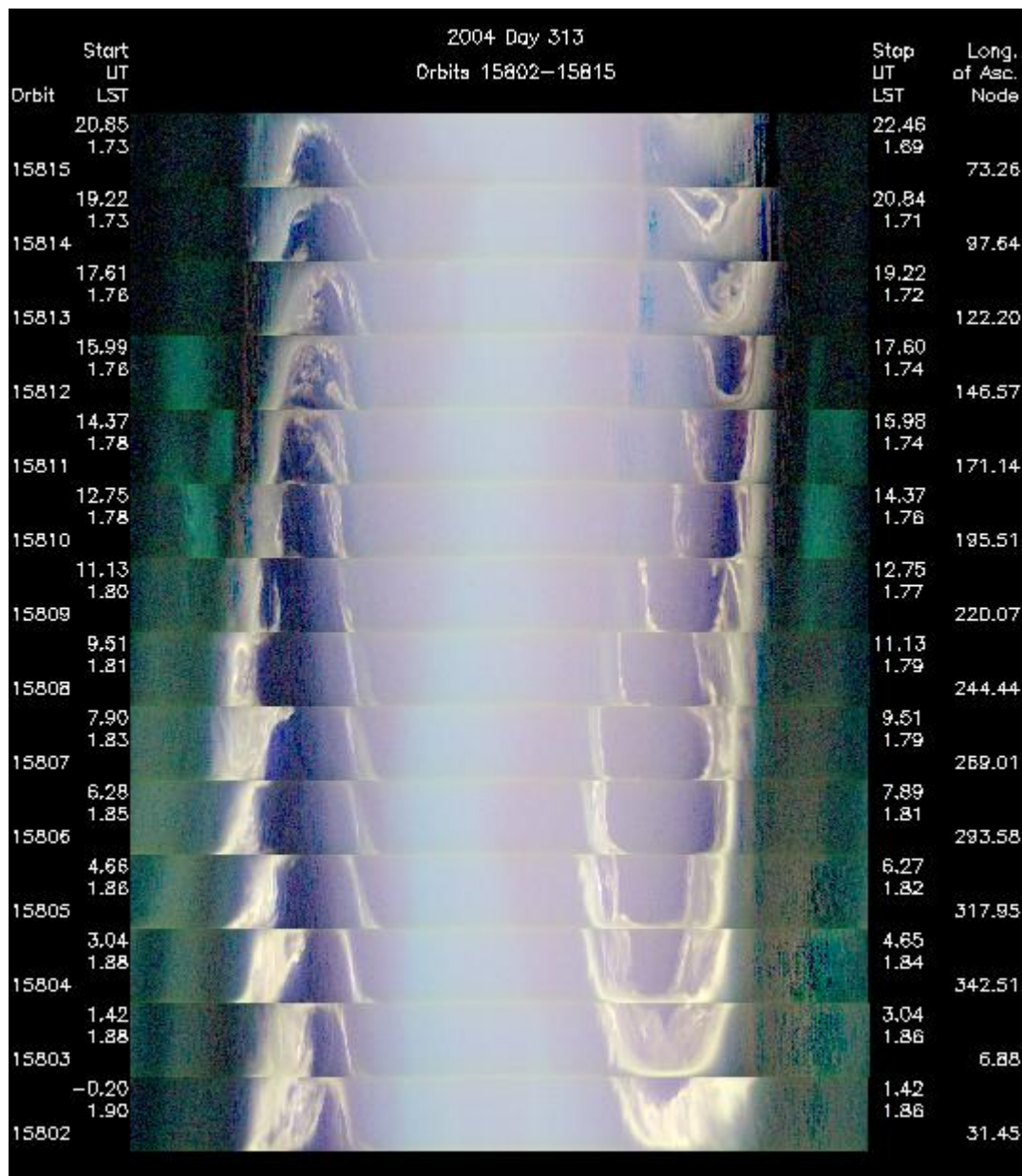


arcs

Additional emission from
ring current precipitation
– enough that it excited



When you see red in these images it means
there is emission in the N2 Lyman birge hopfield
or “LBH” bands

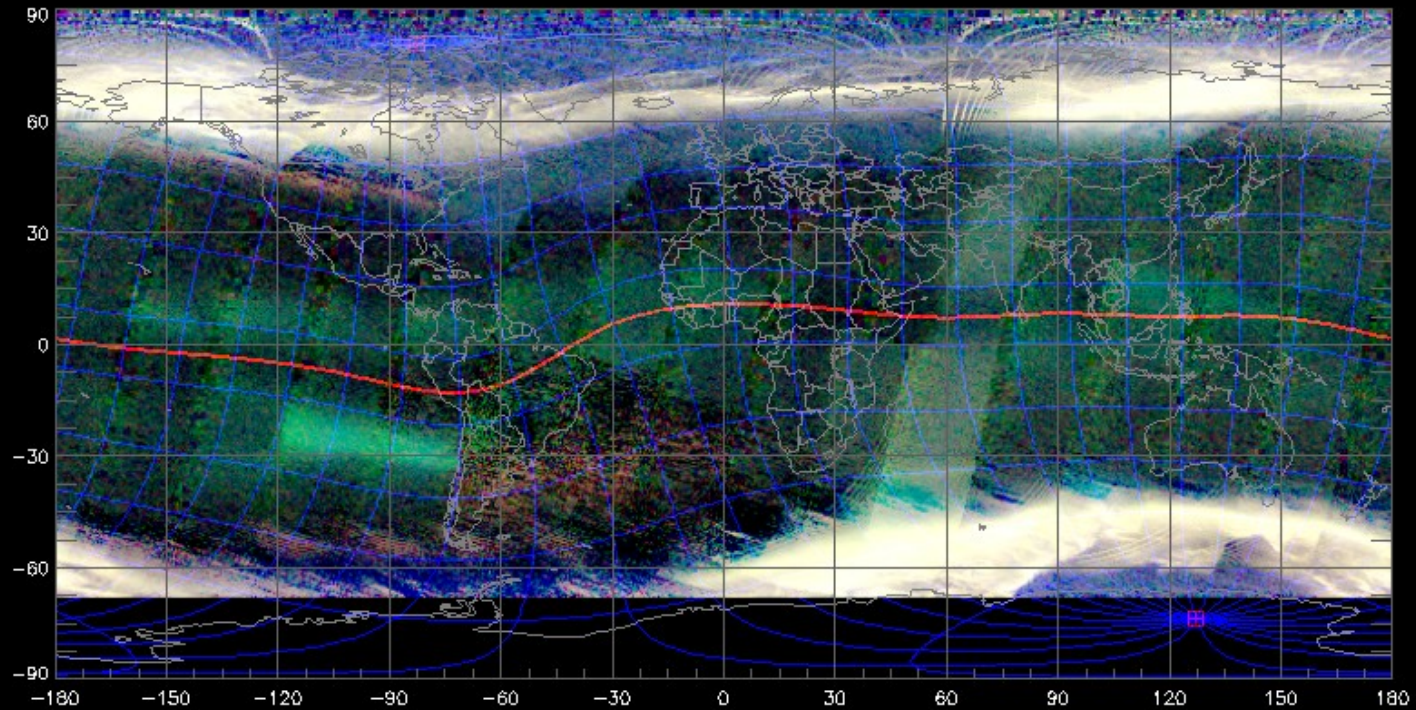


GUVI Composite Image (SZA > 95), 2004 Day 314, Orbits 15816-15830

OI 1304 (blue, 14450.2 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 7075.20 R max (data), 1000.00 R max (color scale))

LBH short (red, 9430.84 R max (data), 1000.00 R max (color scale))

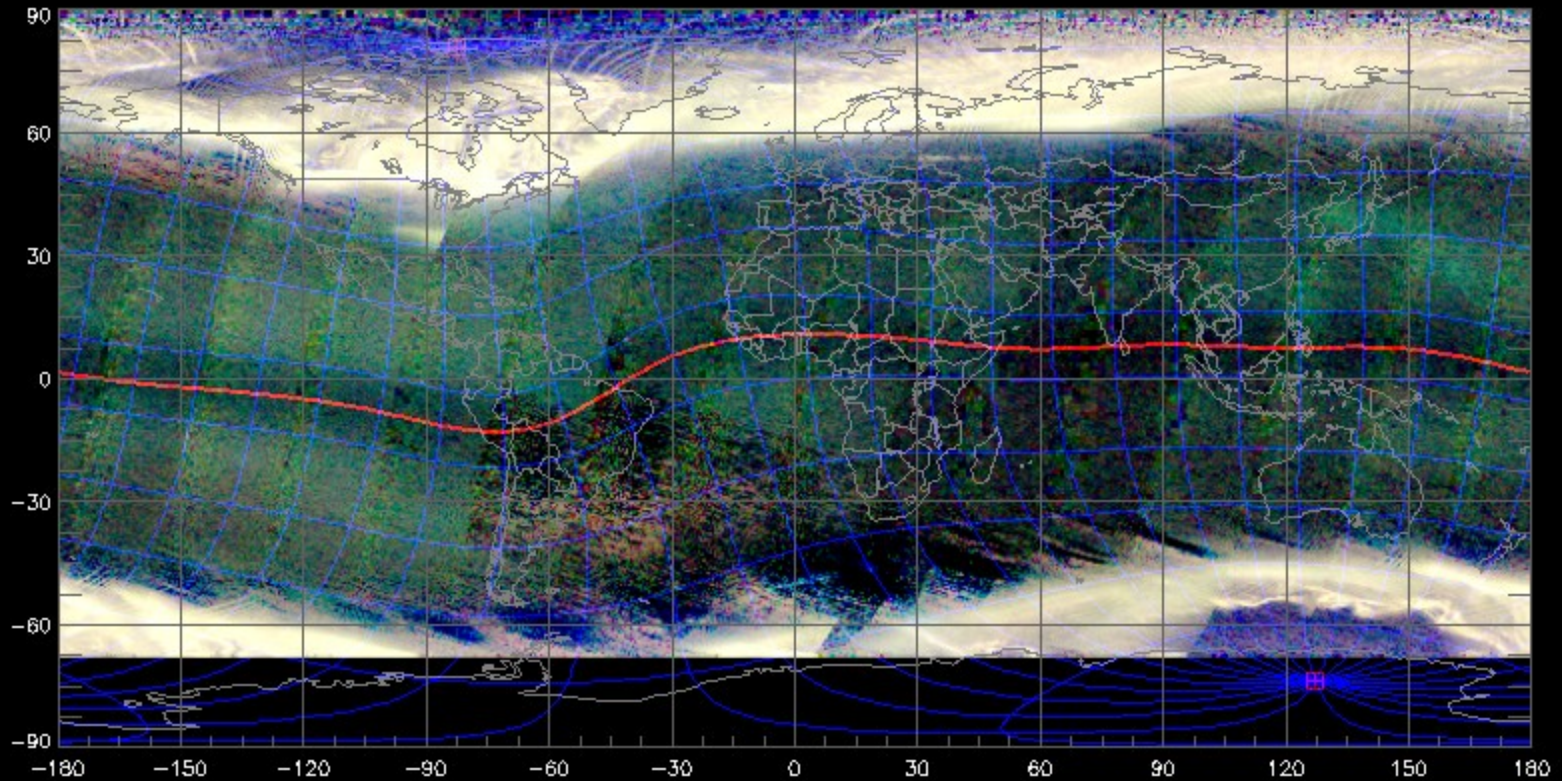


GUVI Composite Image (SZA > 95), 2004 Day 315, Orbits 15831-15845

OI 1304 (blue, 11357.8 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 6696.13 R max (data), 1000.00 R max (color scale))

LBH short (red, 8860.55 R max (data), 1000.00 R max (color scale))

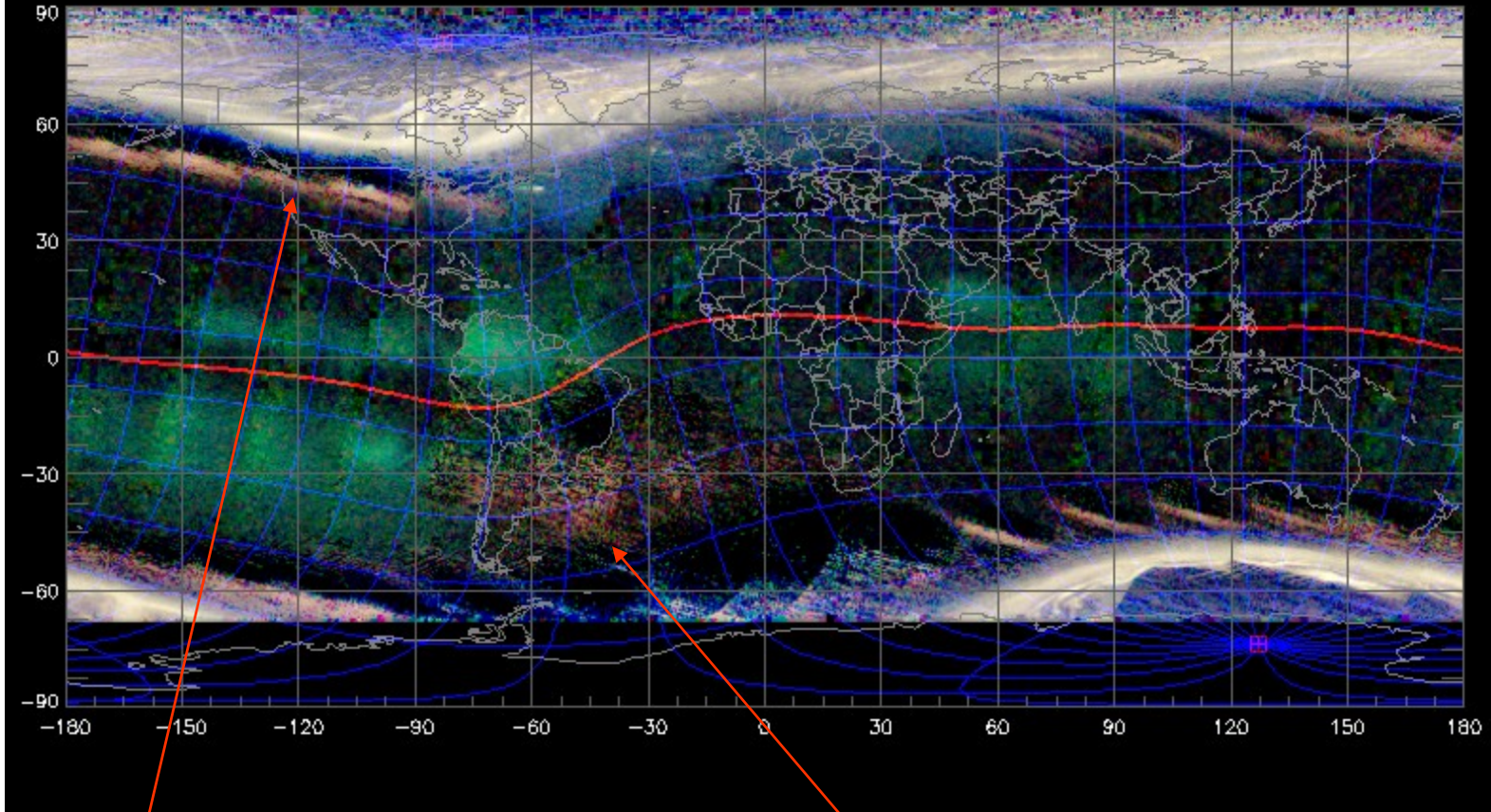


GUVI Composite Image (SZA > 95), 2004 Day 316, Orbits 15846-15860

OI 1304 (blue, 5718.10 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 2311.79 R max (data), 1000.00 R max (color scale))

LBH short (red, 2906.48 R max (data), 1000.00 R max (color scale))



SAA

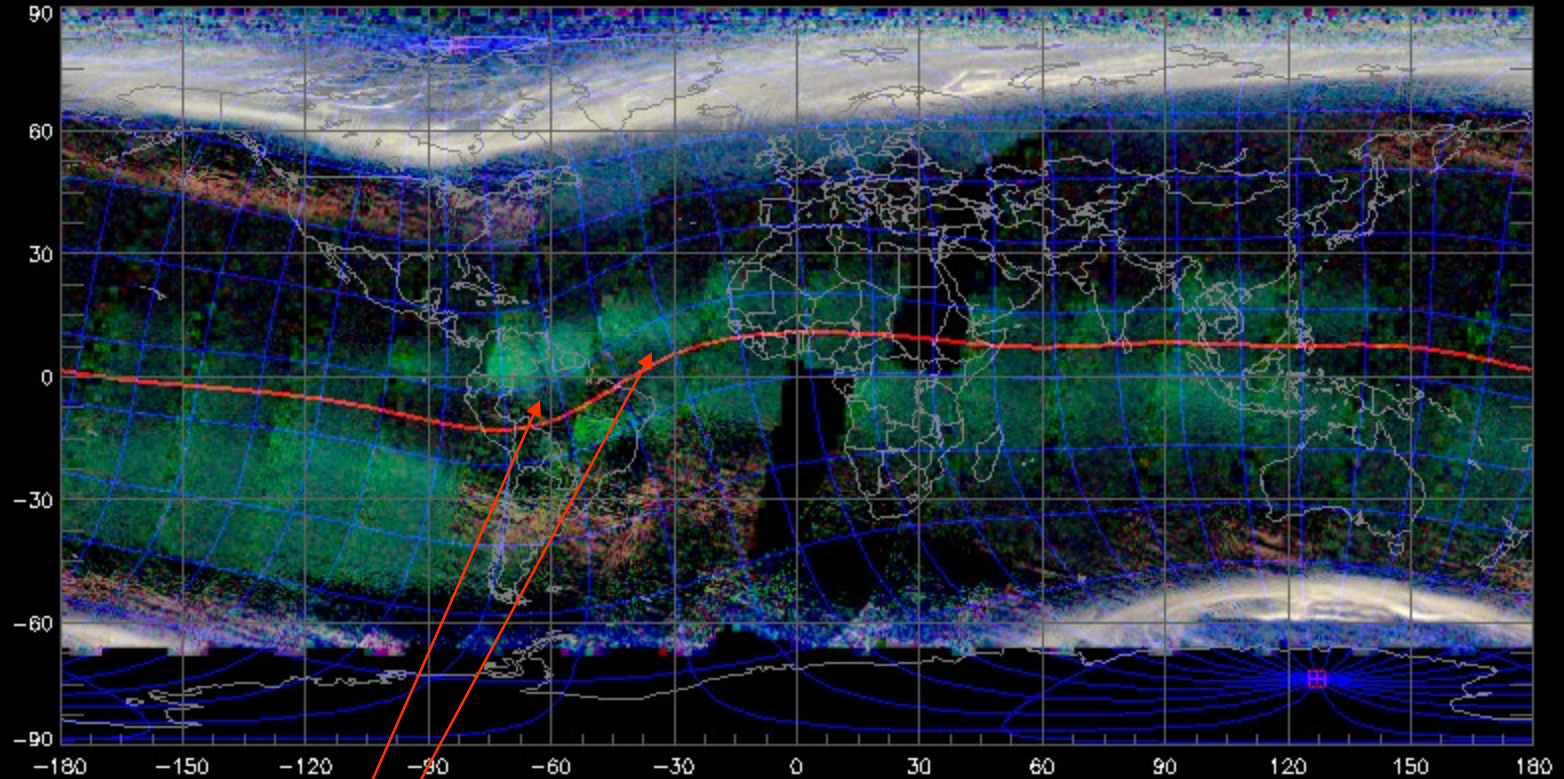
Noise in the instrument due to radiation belt particles

GUVI Composite Image (SZA > 95), 2004 Day 319, Orbits 15891-15904

OI 1304 (blue, 4676.22 R max (data), 10000.0 R max (color scale))

OI 1356 (green, 2144.05 R max (data), 1000.00 R max (color scale))

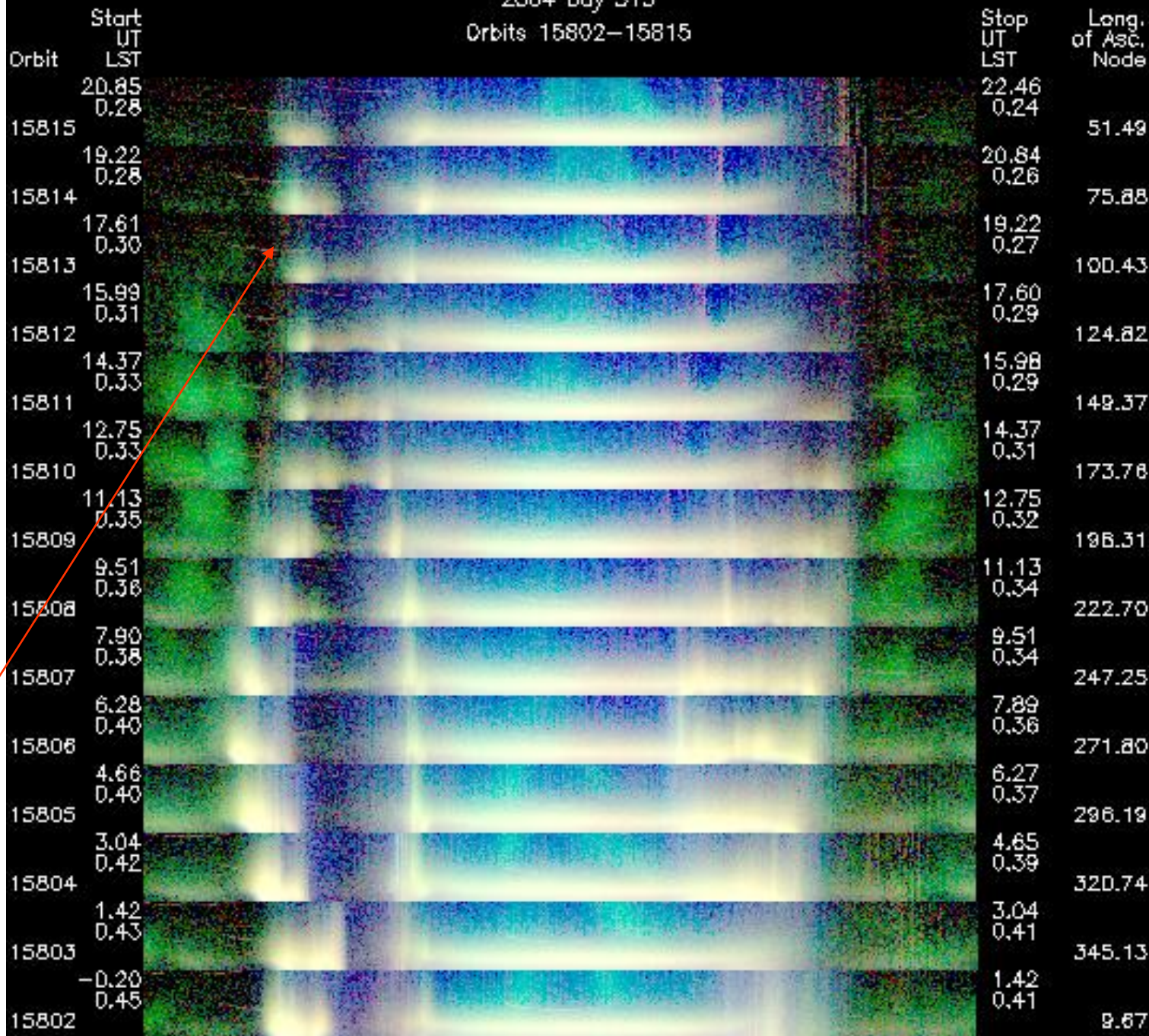
LBH short (red, 3108.15 R max (data), 1000.00 R max (color scale))



bubbles

- Next two images compare the day 313 for 2004 – super storm day – and the 313 for 2003
- We see that there was indeed emission from the limb profile deep in the atmosphere at all wavelengths (seen as sort of a white color)
 - To make these summary images we just assigned colors to the 130.4, 135.6 and LBH (blue, green, red, respectively)
 - So the nightside arcs show up as green
 - The aurora shows up as white
 - Noise shows up as red (on the nightside) because the LBH color is summed up over a larger area of the detector and the noise is proportional to the area of the detector.
- If it was just 135.6 nm recombination we'd see just a high latitude “green” image... don't see this in 2004...

2004 Day 313
Orbits 15802–15815



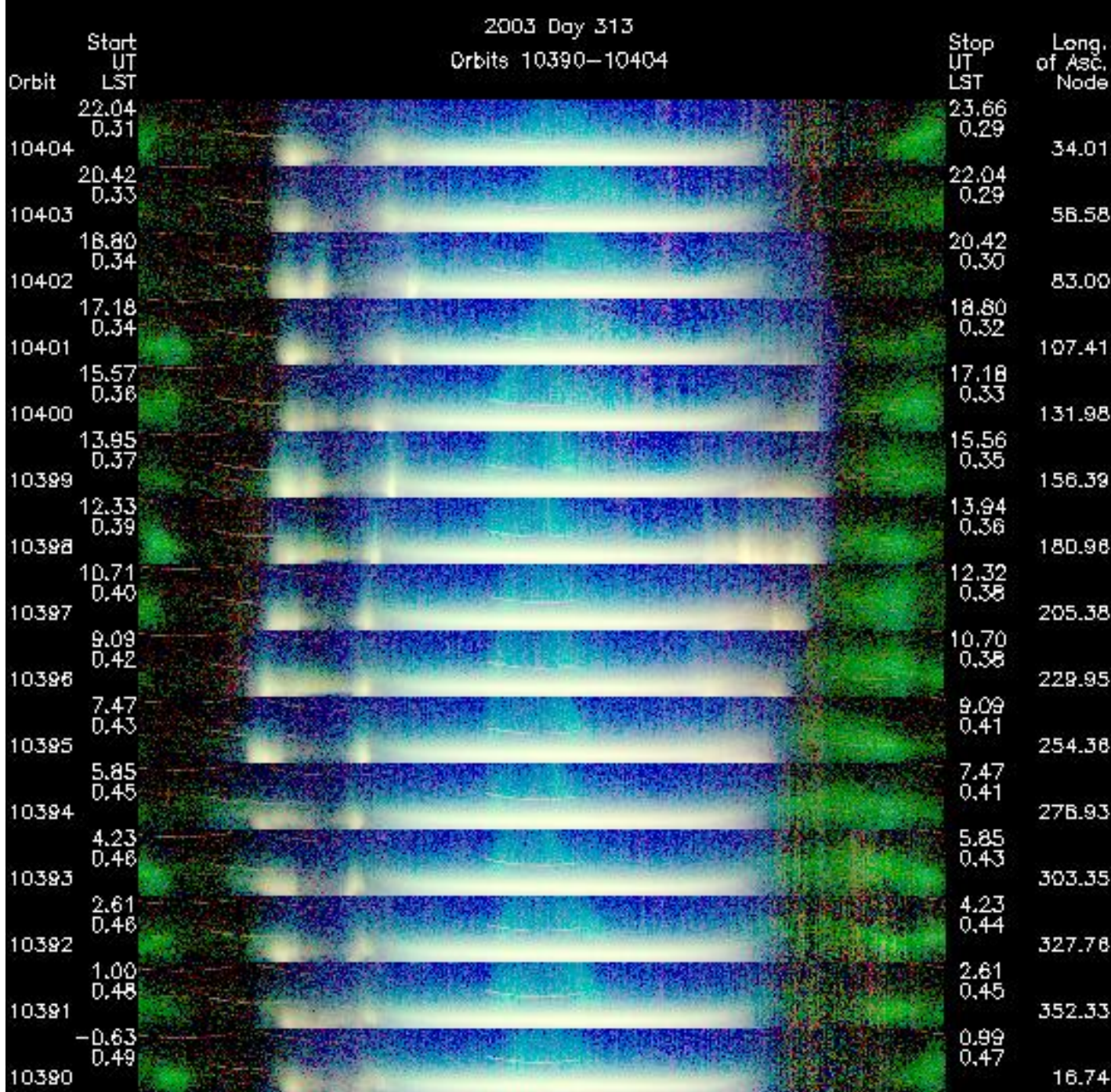
This is a summary of the limb data—so we are looking at the atmosphere edge on.

Altitude runs vertically in each orbit.

Year 2004
Day 313

Star in the field of view (fov)

Year 2003
Day 314

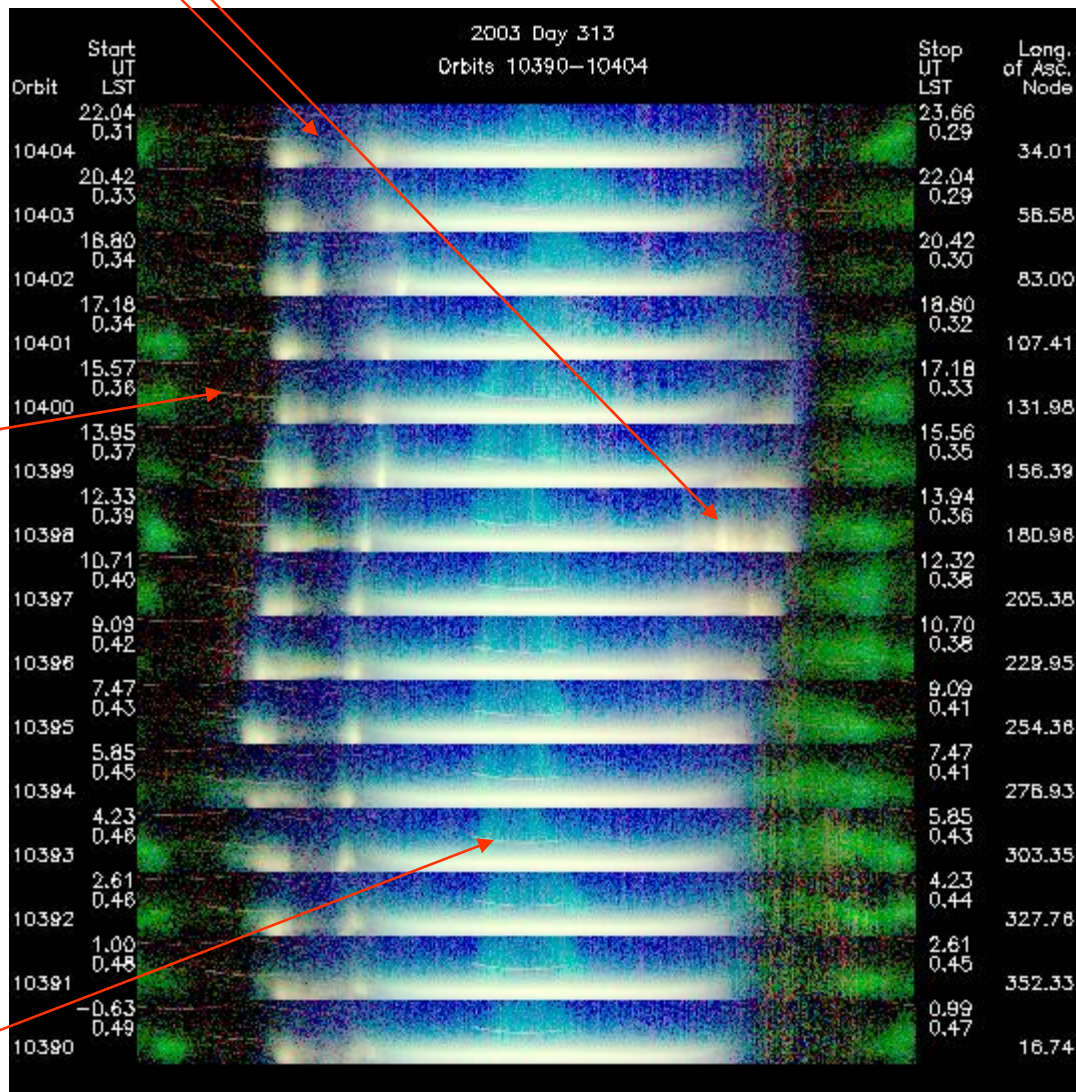


- We can see the equatorial ionization anomaly (EIA) on the dayside
- This is due to radiative recombination to produce the emission in 130.4 and in 135.6
- The dayglow layer which is created by photoelectron impact excitation (for the oxygen lines at 130.4 nm and 135.6 nm and the N₂ LBH bands) and resonant scattering of solar photons (for the oxygen line at 130.4 nm and the hydrogen line at 121.6 nm) is largely confined to altitudes below 300km for all the GUVI colors except the Lyman alpha emission at 121.6nm.

aurora

Limb view

star



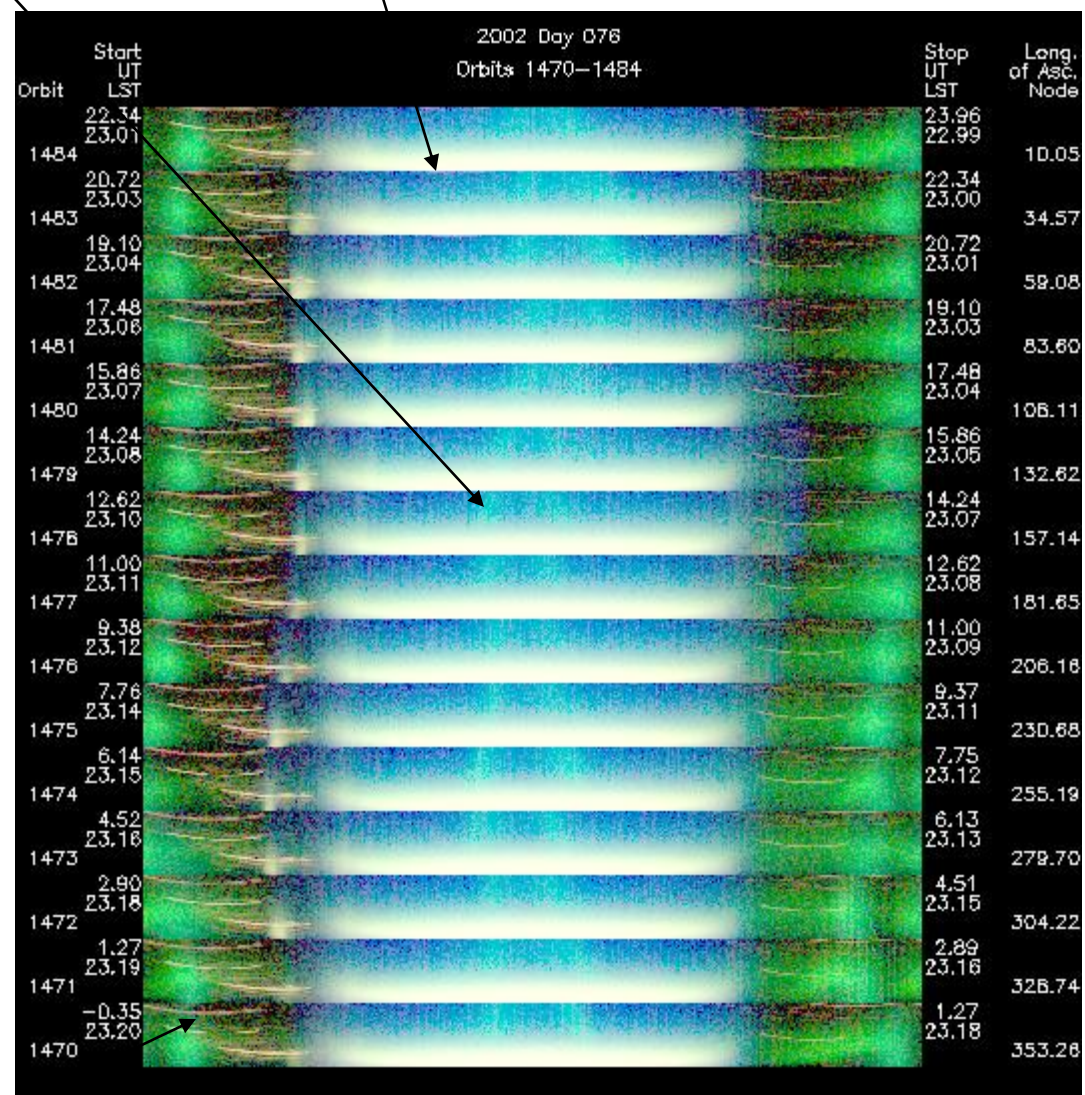
Arcs on the dayside

Dayside observations of the arcs

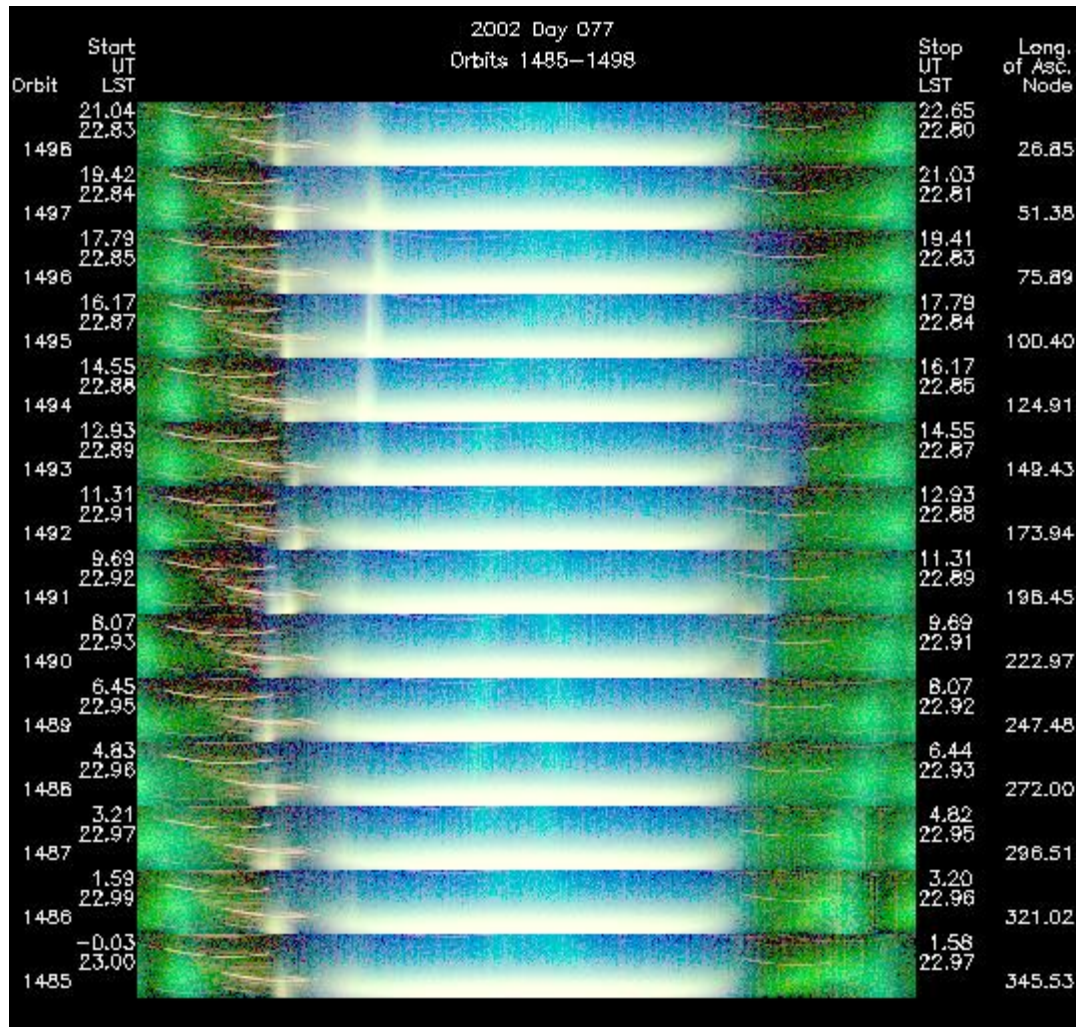
- We are going to look at the way the arcs change on the dayside
- We can't readily see them looking down (in the summary images)
- We'll use the limb profile summaries to see them

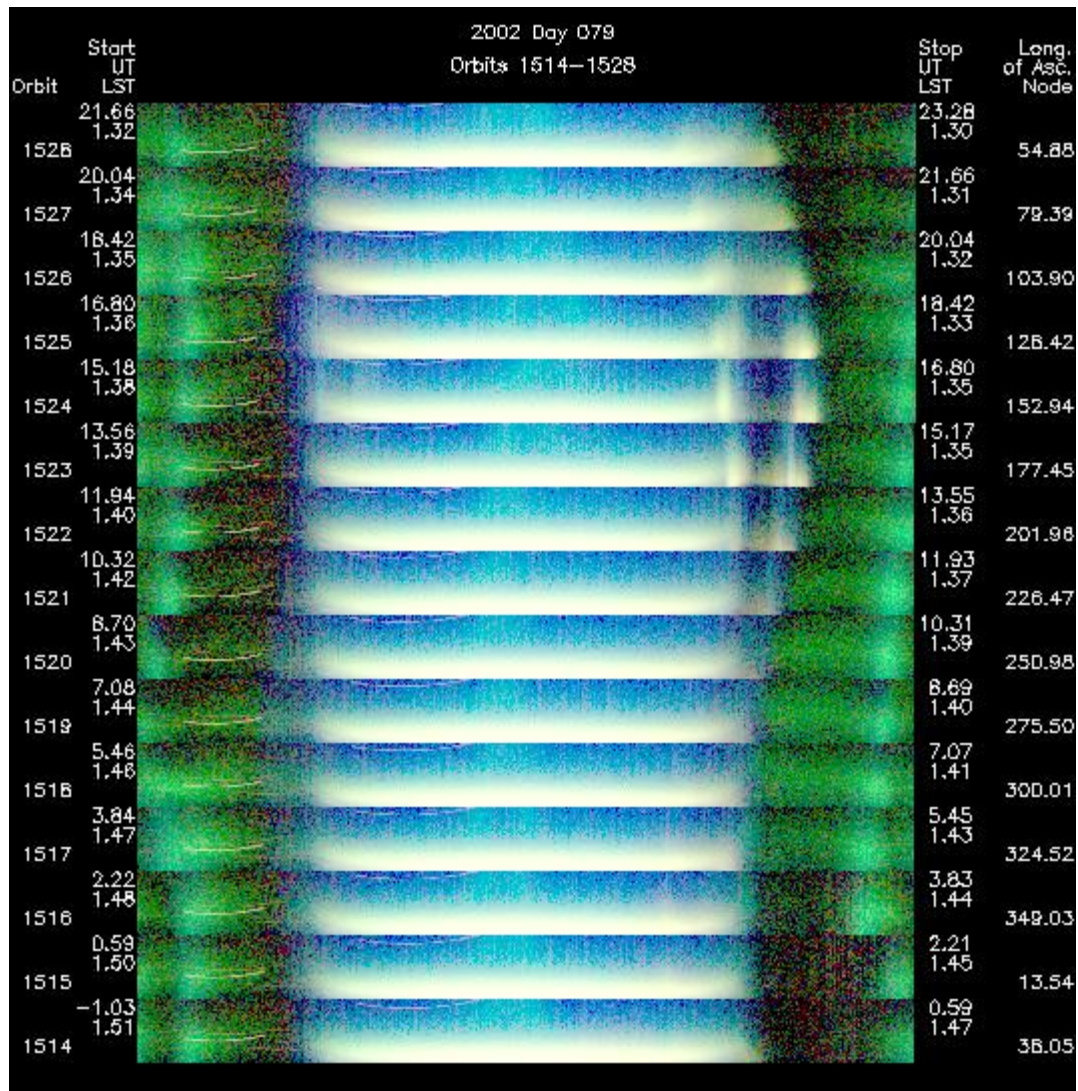
arcs

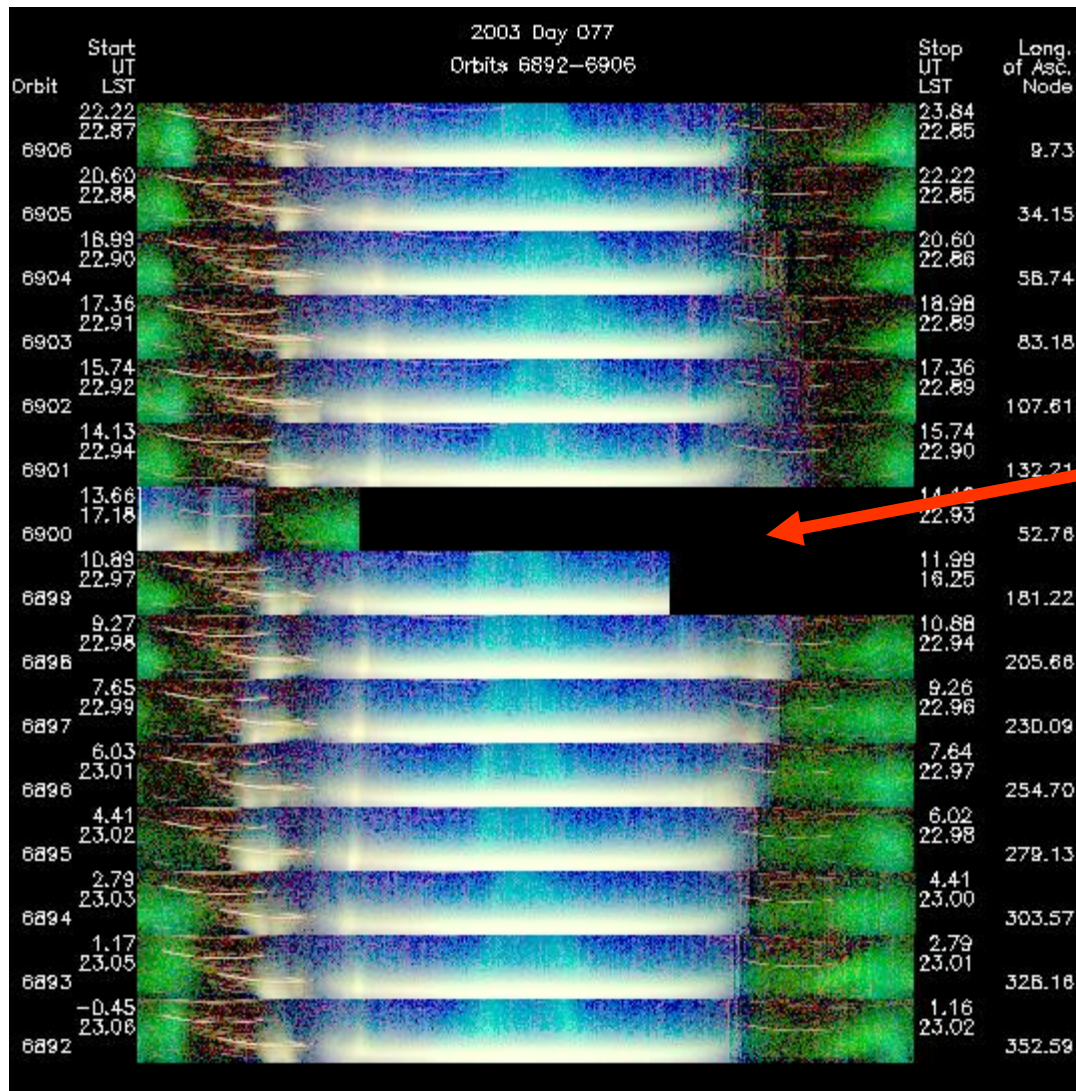
day



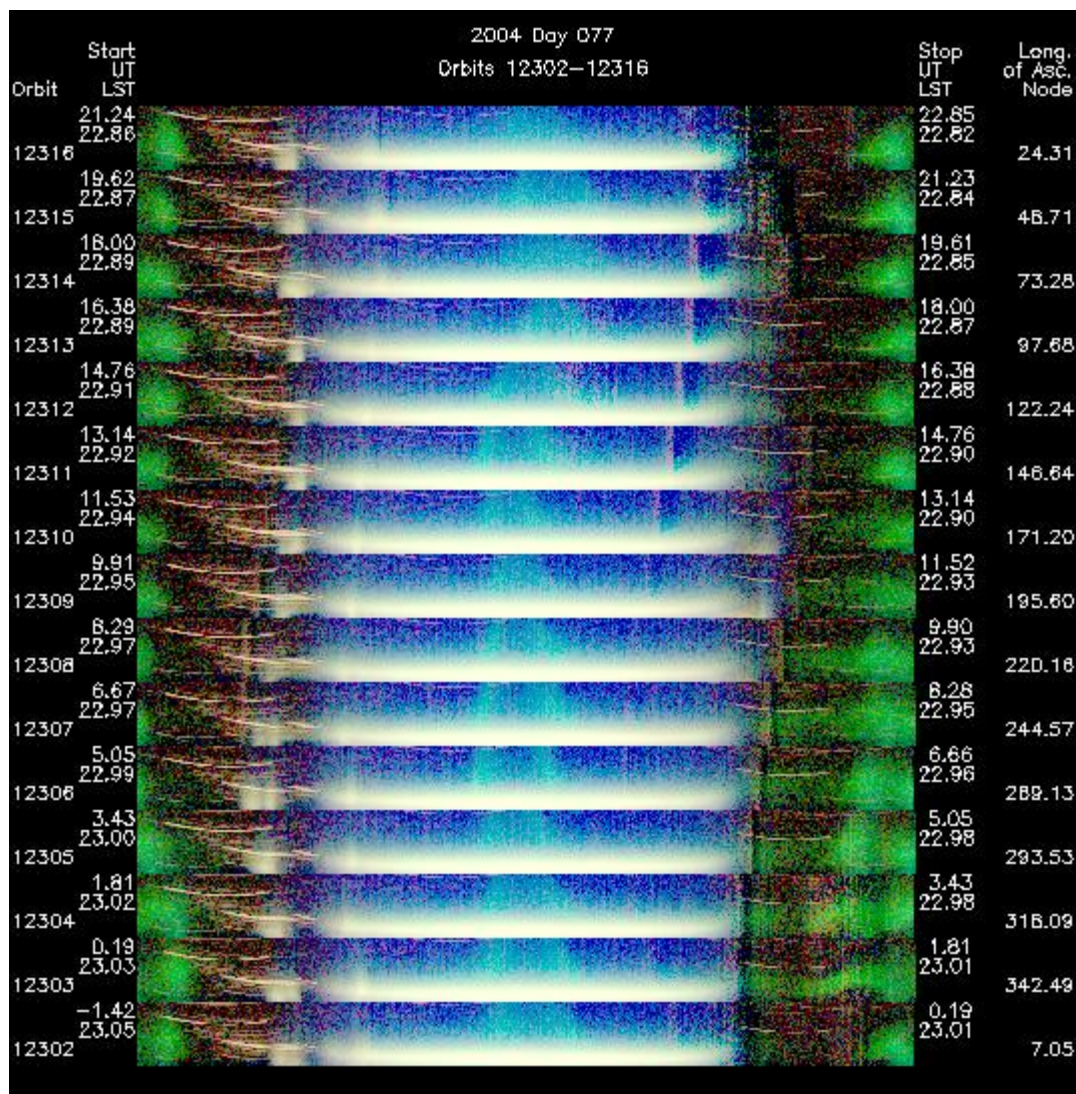
stars

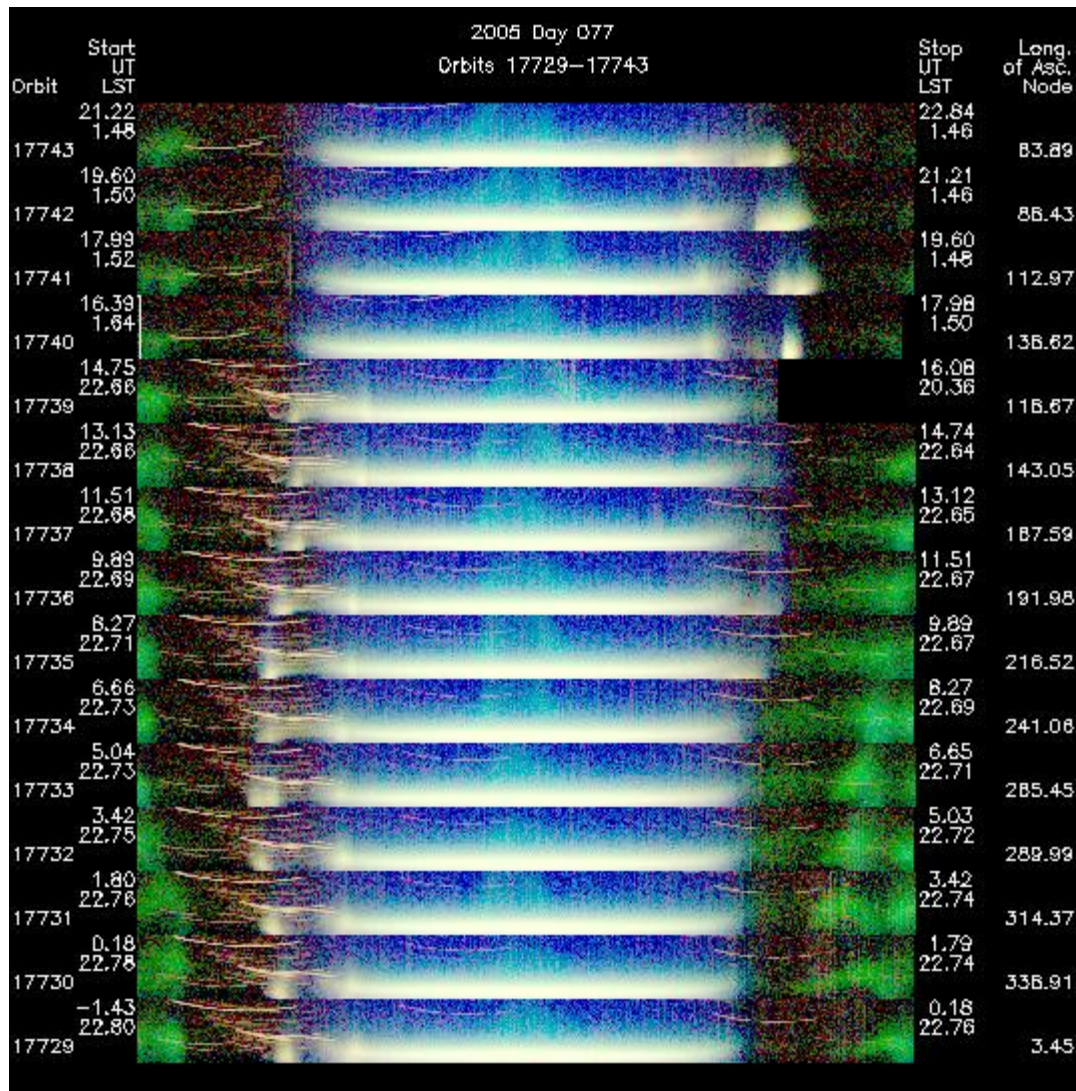


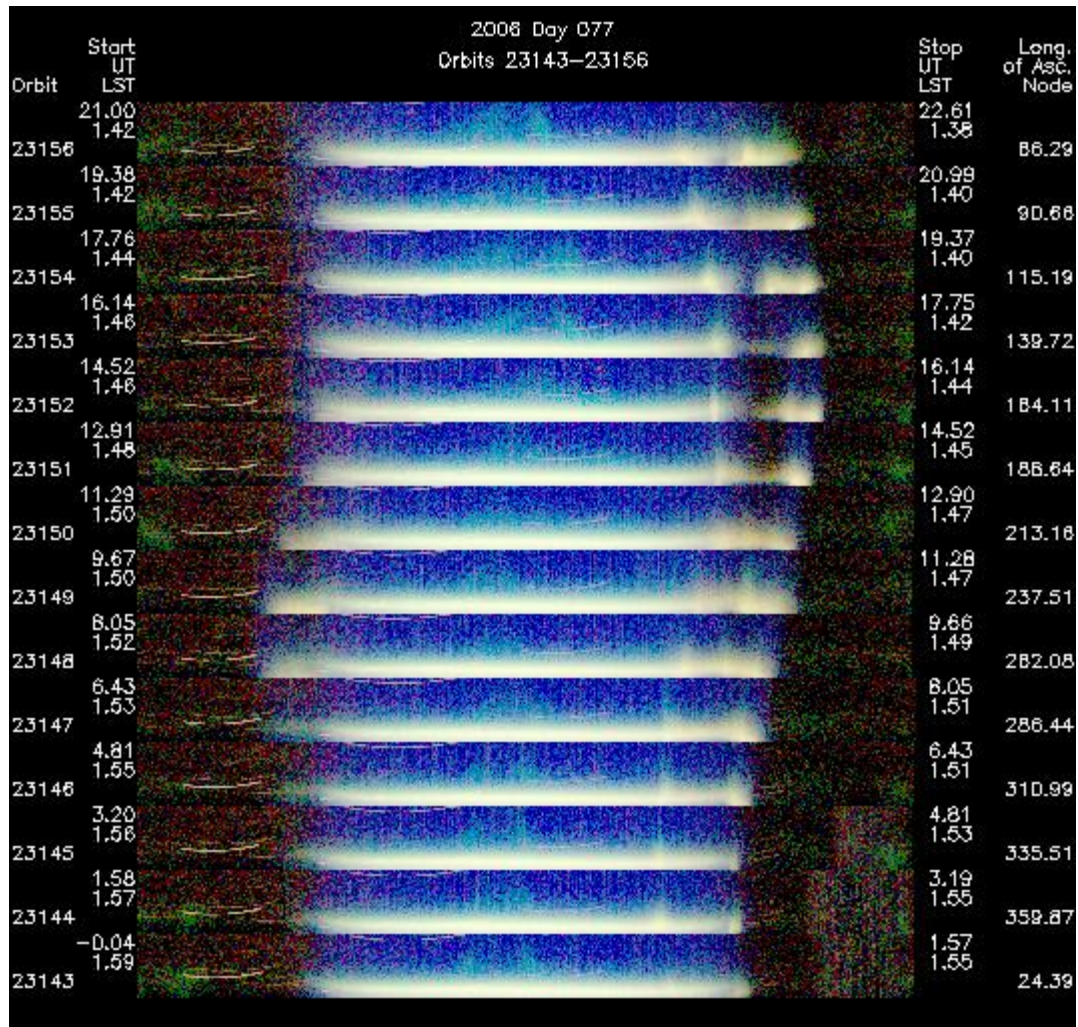




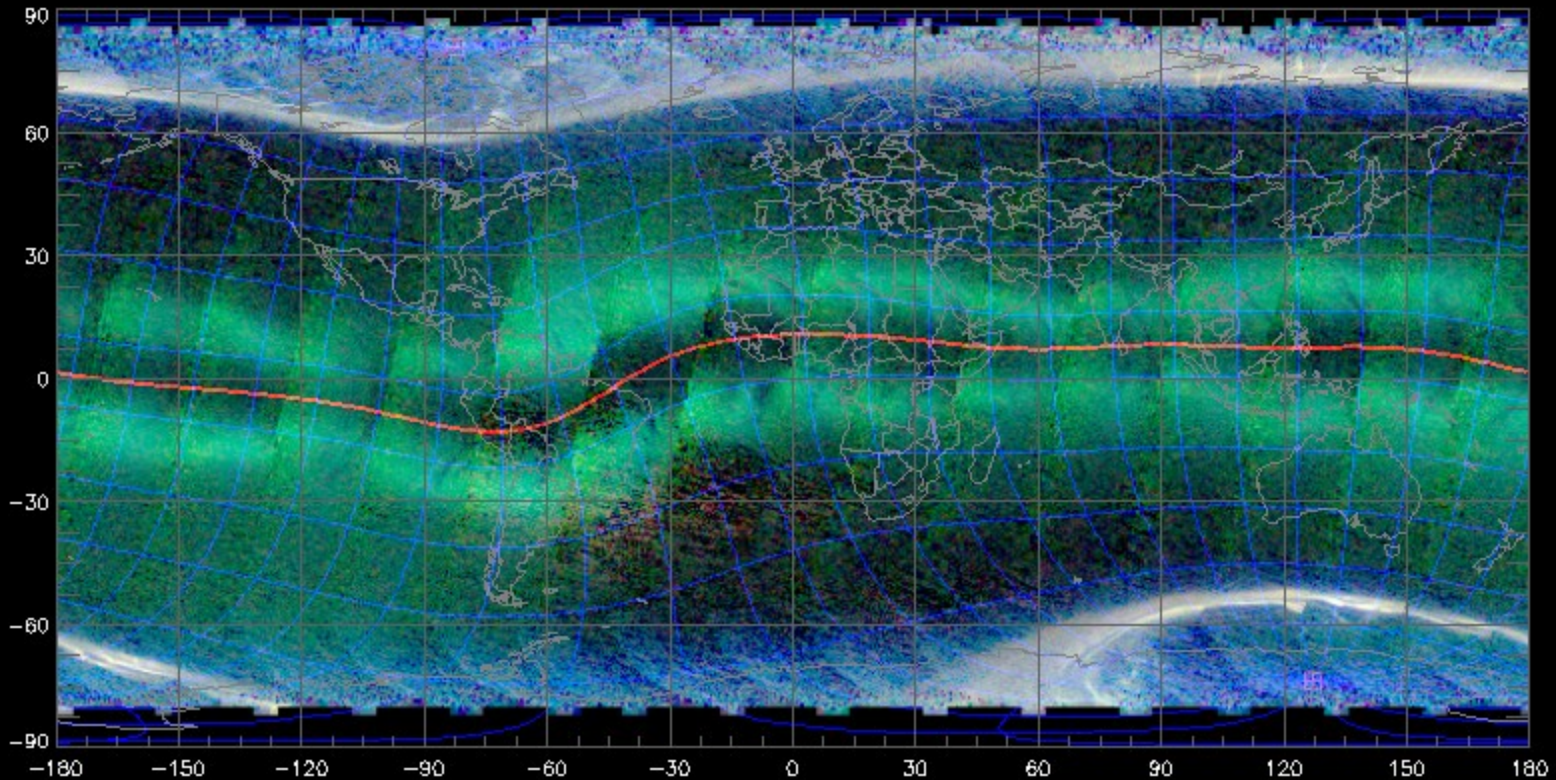
Some kind of problem here with the s/c







GUMI Composite Image (SZA > 95), 2002 Day 076, Orbits 1470–1484
OI 1304 (blue, 6481.79 R max (data), 10000.0 R max (color scale))
OI 1356 (green, 2363.27 R max (data), 1000.00 R max (color scale))
LBH short (red, 2499.09 R max (data), 1000.00 R max (color scale))



Nightside for the same day – near solar max – not like now (hard to see in the summary plots)

TIMED

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SCIENCE DATA SYSTEM

TIMED Coincidence Planning Tool

This is the page for the TIMED Coincidence Planning and visualization tool. It simulates the orbit of the TIMED spacecraft from either a set of two-line element files and spacecraft yaw files, or from a processed PVAT (**P**osition, **V**elocity, **A**ttitude and **T**ime) files and provides 2D visualization of the TIMED spacecraft's position, orientation and instrument views. For detail visualization description, please refer to the [User Guide](#). The tool is written in Java, and it can be run in Netscape, Internet Explorer or others.

There is also a [Date Converter](#) program to enable you to convert from Julian Day to calendar date and vice-versa.

[Go To Coincidence Calculator Home Page](#)

[Go To MDC Home Page](#)

This is the tool to use if you want to compare to a location on the ground.

TIMED

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SCIENCE DATA SYSTEM

TIMED Coincidence Planning Tool

The TIMED Coincidence Planning Tool is a coincidence planning and visualization tool for TIMED. It simulates the orbit of the TIMED spacecraft from a pair of two-line element and spacecraft yaw files. The Tool can be started by clicking on the image below.

For the Coincidence Planning Tool, the accuracy of the predictions decrease the farther into the future you search for coincidences. A [table detailing accuracy information](#) is provided. If you are looking for coincidences far into the future, it is advisable that you re-use the planning tool a week before the original coincidence dates to get more accurate times. If possible, the tool should be used again a day or two prior to the coincidence for the best estimates of the coincidence times.

Please Note: This tool requires Java 1.2 or higher or, if you are using an Apple Macintosh, OS X. For more information, go to the [Installation Guide](#).

For detail visualization description, please refer to the [User Guide](#). Please refer to the [Installation Guide](#) for detailed System Requirements. A history of the software releases can be found in the [Release notes](#).

[Start Coincidence Planning Tool.](#)

	Year	Day	Hr	Min	Sec	mSec
Start Time (UTC):	2002	289	13	39	18	151
Stop Time (UTC):	2002	290	13	39	18	151

Ground Site Choices: **Poker Flat, AK, USA [FPI]**

Running the coincidence calculator

- On the page you just opened, click on the link “start coincidence planning tool”
- This runs a Java application
- You will get a window that looks like this ->

Note that you have to have Java installed on your machine!

The screenshot shows a Java applet window titled "TIMED Coincidence Planning Tool". The window is divided into several sections:

- Time Interval:** A table with columns for Year, Day, Hr, Min, Sec, and mSec. The Start Time (UTC) is 2007, 303, 13, 11, 17, 865. The Stop Time (UTC) is 2007, 304, 13, 11, 17, 865.
- Ground site:** A dropdown menu for "Ground Site Choices" set to "User Defined". Below it is a text field for "Station Name" also set to "User Defined".
- Latitude (deg):** 0
- East Longitude (deg):** 0
- Distance Units:** km
- Range method:** Altitude and LOS Range
- Altitude of interest (km):** 100
- Line of Site Range (km):** 700

At the bottom, there are radio buttons for "SABER" (selected), "GUM", and "TIDI". Below these are three buttons: "Generate Coincidence list", a save icon, and "Plot Selection". The bottom of the window is a large empty area for results, and the footer says "Java Applet Window".

This was generated for the november 2004 storm

- We can look at each one of these and see what the viewing geometry looked like
- The coincidence occurred for times where the GUVI field of view was within 700 km of the site (this user specified)
- This means that the GUVI field of view was within 700 km of the site
- The circle of the site field of view is mapped to the user specified altitude (100 km in this case)

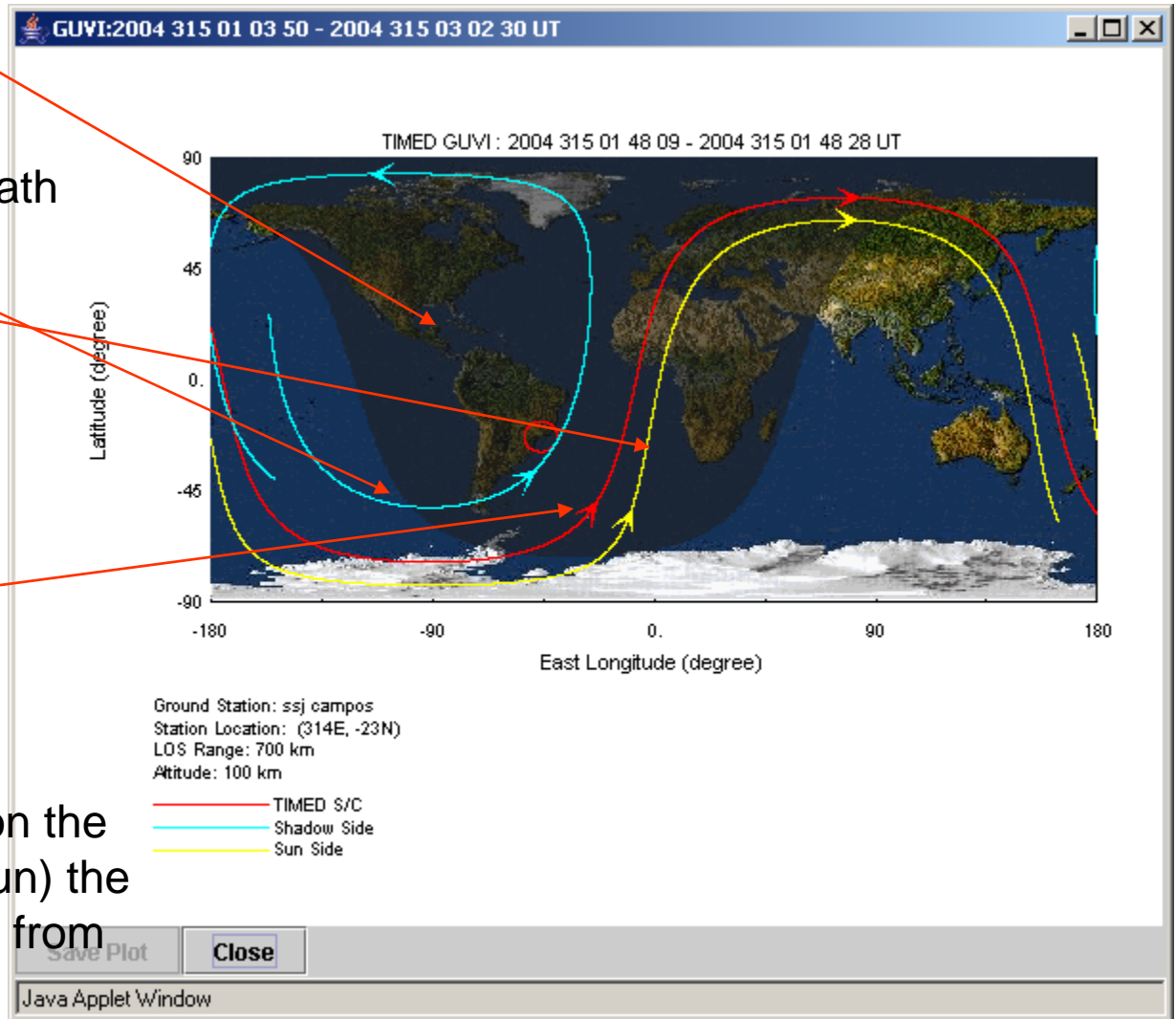
The screenshot shows the TIMED Coincidence Planning Tool interface. The 'Time Interval' section shows a start time of 2004 310 0 11 17 865 and a stop time of 2004 320 0 11 17 865. The 'Ground site' section shows 'User Defined' as the ground site choice, 'ssj campos' as the station name, latitude -23, and east longitude 314. The distance units are set to 'km', the range method is 'Altitude and LOS Range', the altitude of interest is 100 km, and the line of site range is 700 km. The 'Generate Coincidence list' button is active, and the 'Plot Selection' button is also visible. The main window displays a list of coincidence events with their durations in seconds.

Year	Day	Hr	Min	Sec	mSec	Year	Day	Hr	Min	Sec	mSec	Coincidence duration (secs)
2004	310	0	11	17	865	2004	310	03	39	07	000	216
2004	310	05	18	35	000	2004	310	05	21	58	000	203
2004	310	17	39	19	000	2004	310	17	42	40	000	201
2004	310	19	18	37	000	2004	310	19	22	15	000	218
2004	311	03	56	42	000	2004	311	04	00	05	000	203
2004	311	05	35	42	000	2004	311	05	39	05	000	203
2004	311	17	56	35	000	2004	311	17	59	52	000	197
2004	311	19	36	18	000	2004	311	19	39	46	000	208
2004	312	02	34	20	000	2004	312	02	37	20	000	180
2004	312	04	14	06	000	2004	312	04	17	23	000	197
2004	312	16	35	03	000	2004	312	16	38	14	000	191
2004	312	18	13	53	000	2004	312	18	17	14	000	201
2004	313	02	51	37	000	2004	313	02	55	18	000	221
2004	313	04	31	20	000	2004	313	04	34	39	000	199
2004	313	16	52	01	000	2004	313	16	55	25	000	204
2004	313	18	31	13	000	2004	313	18	34	46	000	213
2004	314	03	09	15	000	2004	314	03	12	43	000	208
2004	314	04	48	26	000	2004	314	04	51	51	000	205
2004	314	17	09	15	000	2004	314	17	12	33	000	198
2004	314	18	48	42	000	2004	314	18	52	26	000	224
2004	315	01	48	09	000	2004	315	01	48	28	000	19
2004	315	03	26	43	000	2004	315	03	30	01	000	198
2004	315	05	06	01	000	2004	315	05	08	14	000	133
2004	315	15	48	27	000	2004	315	15	50	26	000	119
2004	315	17	26	32	000	2004	315	17	29	50	000	198

nightside

Edge of the guvi swath

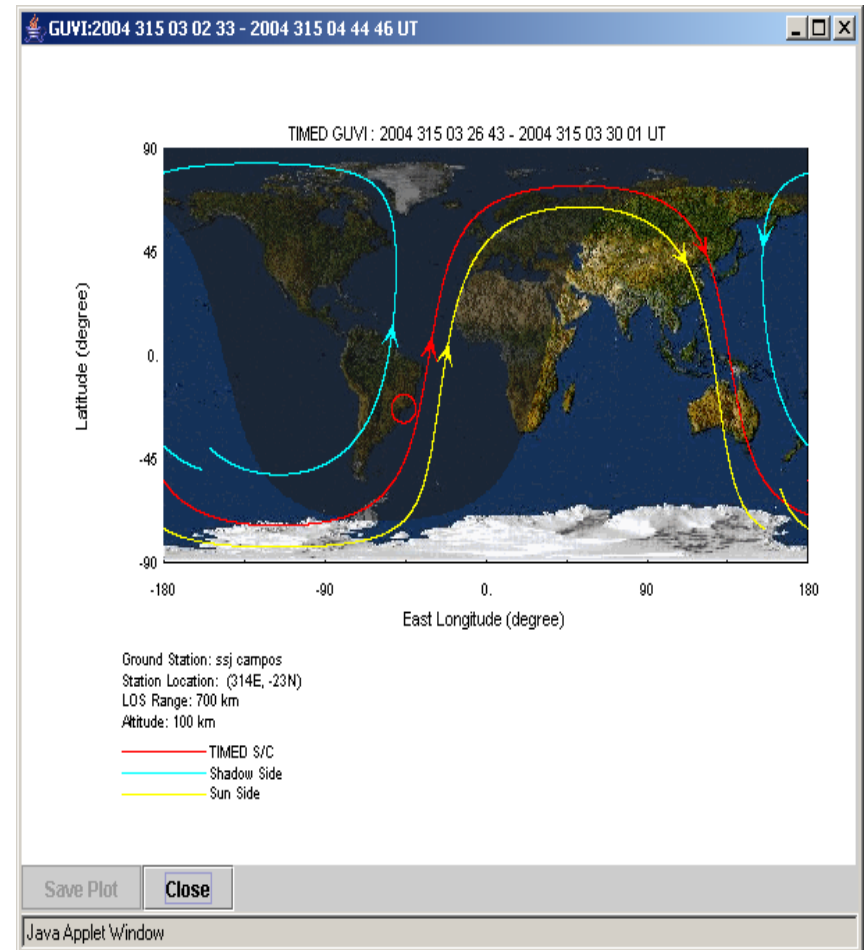
Spacecraft track



Because the GUVI limb is on the nightside (away from the Sun) the limb profiles can be located from these pictures

We can look at the next coincidence

- Note that the orbits moved to the west – this helps to get an idea of how the fov moves.



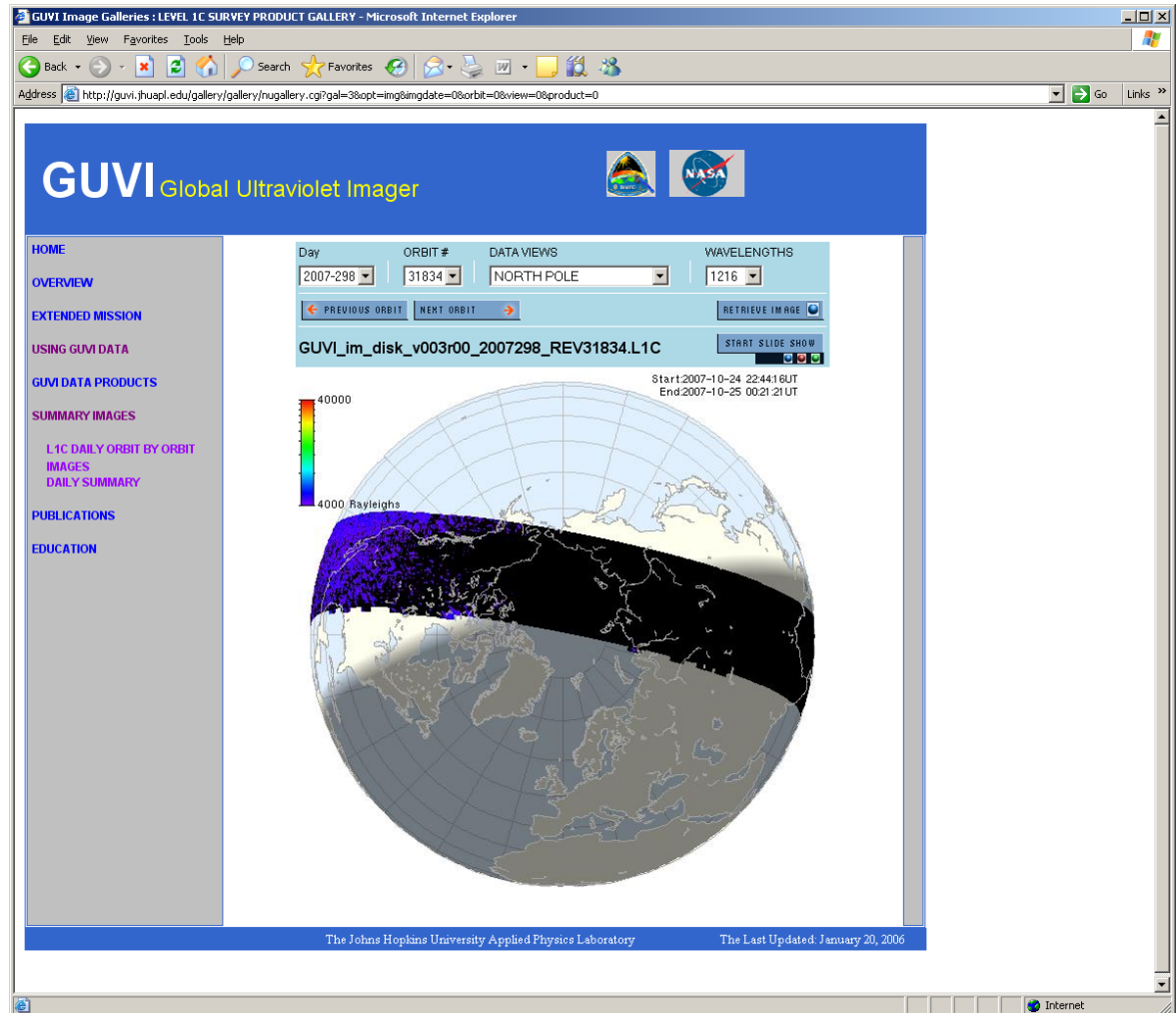
To determine which orbit of GUVI data to get

- Go to the GUVI web page that has the “planning tools”
- Enter the date and the UT from the coincidence planner
- Now you know the orbit number

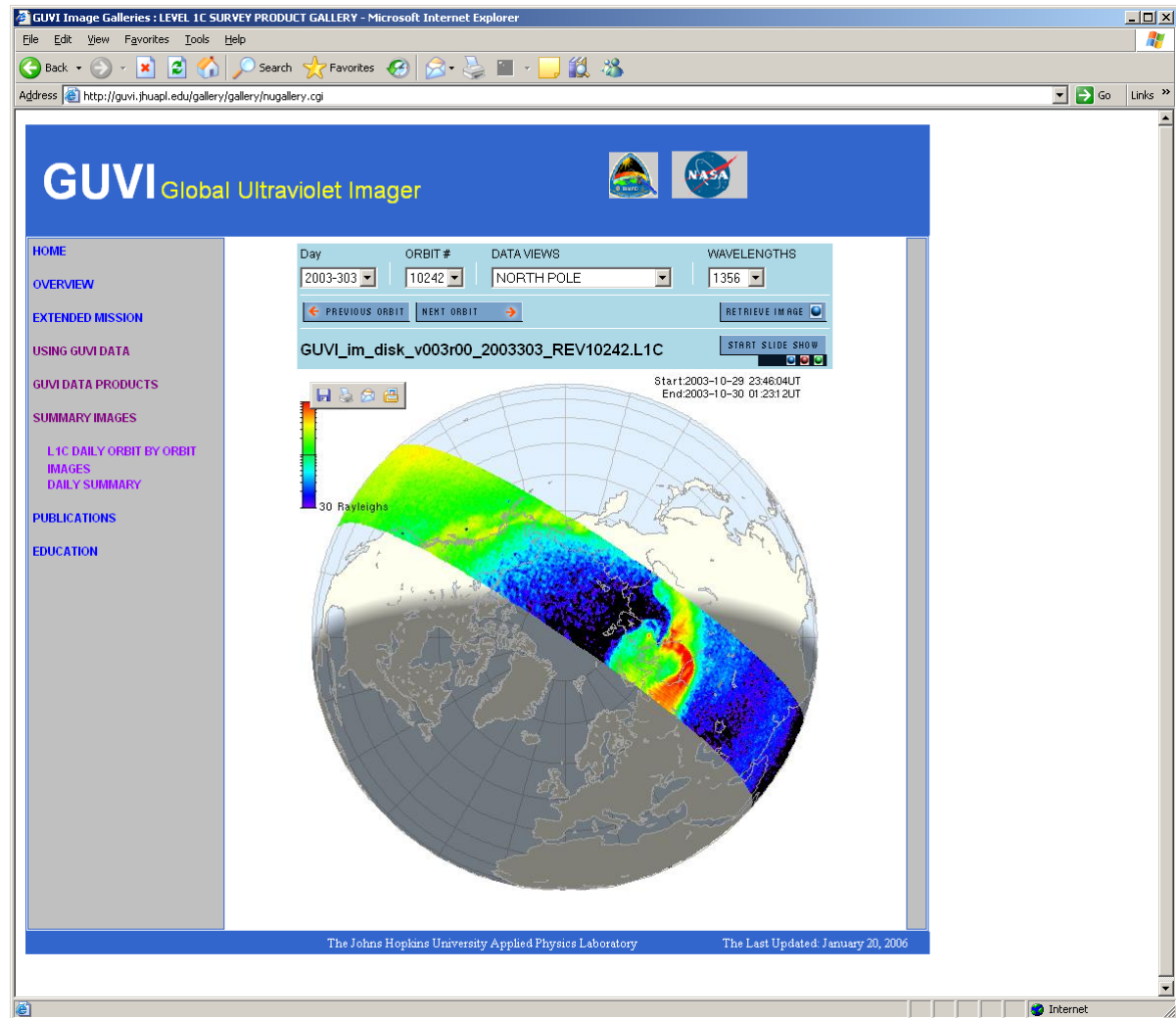
The screenshot shows a Microsoft Internet Explorer browser window displaying the GUVI Global Ultraviolet Imager website. The address bar shows the URL: http://guvi.jhuapl.edu/science/planning/guvi_orbitnumber.html. The page features a blue header with the GUVI logo and NASA logo. A navigation menu on the left includes links for HOME, OVERVIEW, EXTENDED MISSION, USING GUVI DATA, GUVI DATA PRODUCTS, SUMMARY IMAGES, PUBLICATIONS, and EDUCATION. The main content area is titled "GUVI Orbit Number Calculator" and includes a description: "This calculator can be used to compute GUVI orbit number of a specified time, or vice versa." Below the description is a form with various input fields and buttons. The form includes a "Last Orbit" field with the value 31891, a date field set to 2004-11-10, a time field set to 3:45:00, and a DOY field set to 315. Other fields include Orbit (15834), Altitude For Conversions (km) (150), Latitude (33.538), Longitude (336.307), Magnetic Latitude (28.34), Dip Latitude (25.672), Magnetic Longitude (55.967), Altitude (623.127), MLT (21.7), Solar Zenith Angle (143.116), Solar Local Time (Start Of Orbit) (1:43:13), and Solar Local Time (Sub-Satellite Point) (2:26:28). At the bottom of the form are three buttons: "DOY -> date & orbit", "date -> DOY & orbit", and "orbit -> date & DOY".

We can also look at a geolocated view of each orbit of GUVI data by color

- Go to the “summary images” page
- Click on “L1C orbit by orbit”

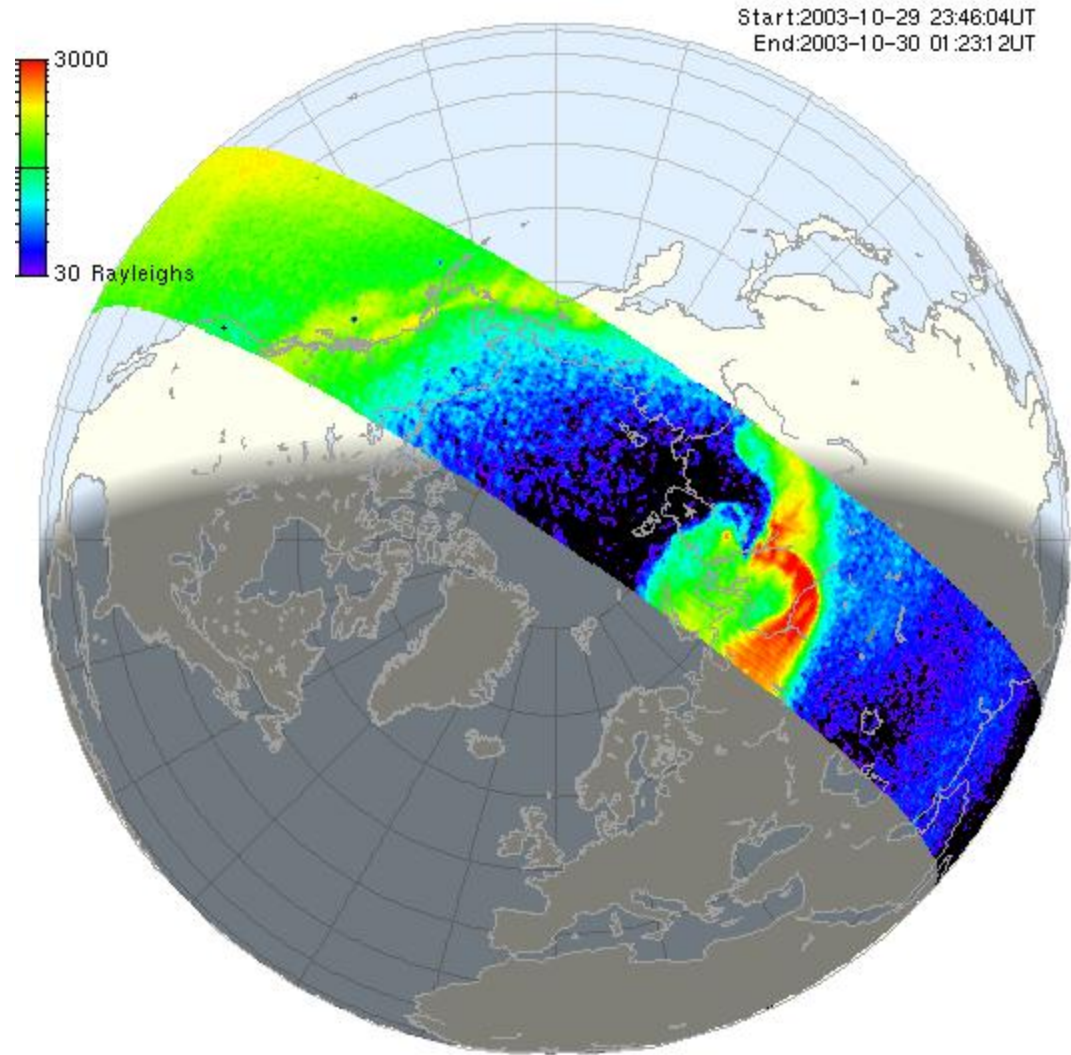


Just to demonstrate the use of the “L1C orbit by orbit” product



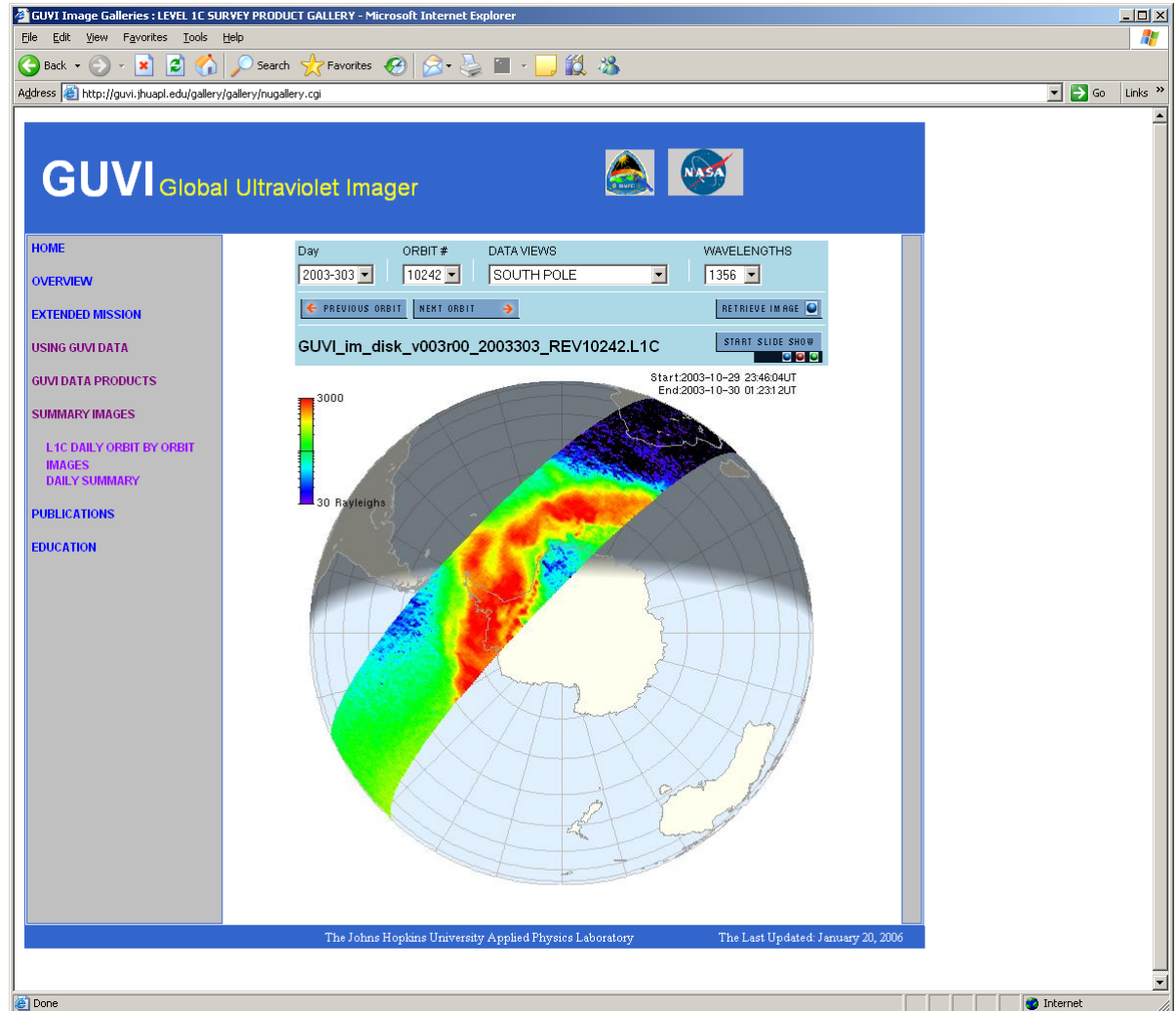
You can also just get the image

- This is for one of the five GUVI colors
- One of the orbits for the day
- North pole view

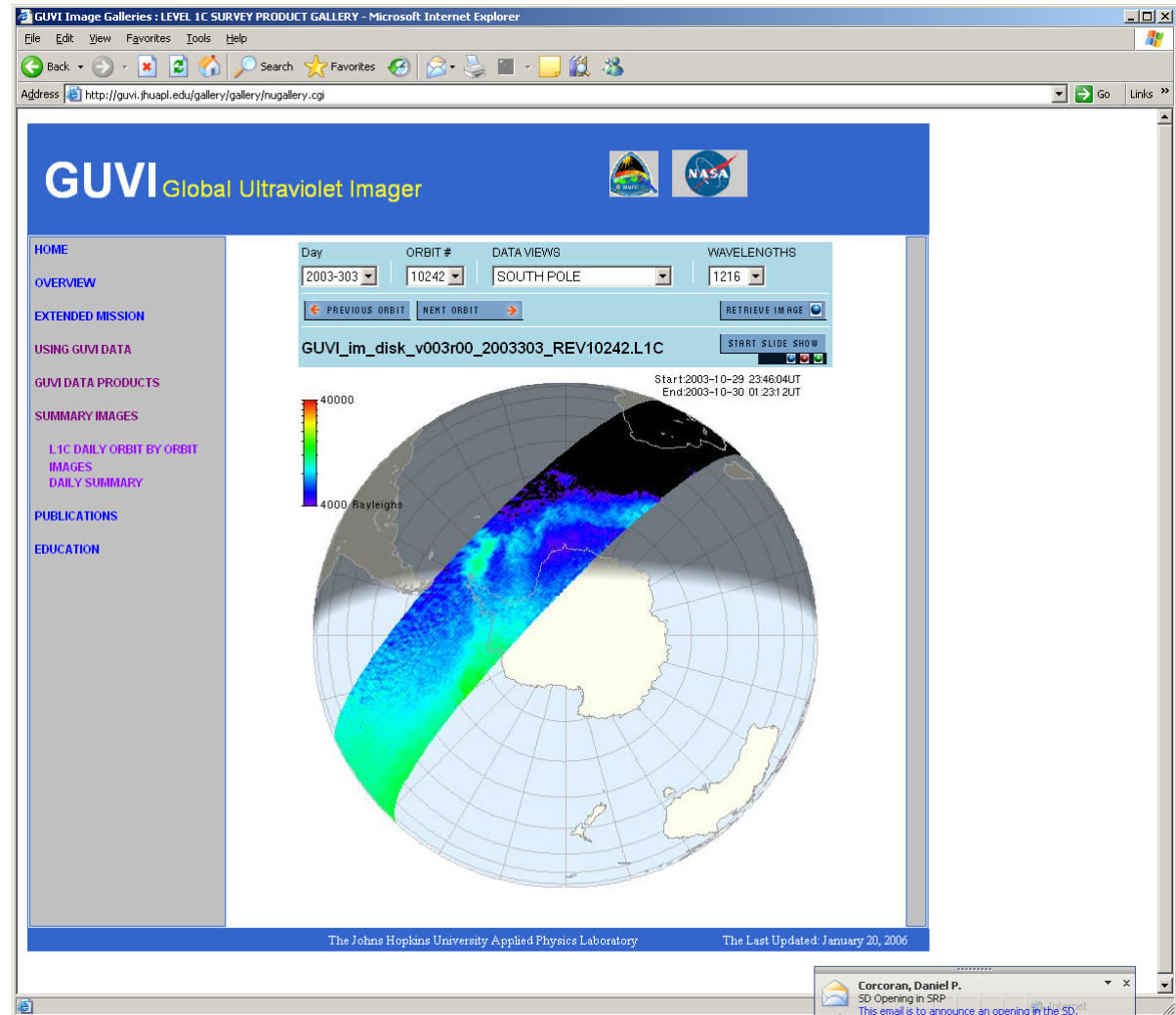


Pick south pole

- Gives you a better idea of where the data were taken and what they looked like



Choosing Lyman alpha – 1216 lets you see where proton precipitation occurred



Choosing the “ascending equator” option lets you see the equatorial data

- For this day it happened that the ascending node was on the night side.

