Continuation The EOSDIS Testbed Data System

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Award: NAGW-4205
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Due Date: October 1, 1995

The continuation of the EOSDIS Testbed ("Testbed") has materialized from a multi-task system to a fully functional stand-alone data archive distribution center that once was only X-Windows driven to a system that is accessible by all types of users and computers via the World Wide Web.

Throughout the past months, the Testbed has evolved into a completely new system. The current system is now accessible through Netscape, Mosaic and all other servers that can contact the World Wide Web. On October 1, 1995 we will open to the public and we expect that the statistics of the type of user, where they are located, and what they are looking for will drastically change.

The current statistics for this quarter are really unusable since the University of Colorado satellite retrieving station has been down since the first of June 1995. Although it should be noted that because of this down time we have gained important information in that past data has not been a large draw. In fact, past data has rarely been ordered over the second quarter. This finding has proved that most users are wanting near real-time satellite data and that past data has not been as needed as suspected.

What is the most important change in the Testbed has been the Web interface. This interface will allow more users access to the system and walk them through the data types with more ease than before. All of the callbacks are written in such a way that icons can be used to easily move around in the programs interface.

The homepage offers the user the opportunity to go and get more information about each satellite data type and also information on free programs (Example 1). By selecting the "HRPT" icon, the user can quickly move the HRPT/LAC information page and quickly see what HRPT/LAC data sets are along with technical information. An inventory of what data sets are available on the Testbed along with a Noaa icon to link to the Noaa AVHRR guide is also accessible to the user (Example 2). The GAC and GOES information pages work exactly the same way as described in the HRPT/LAC information page (Examples 3 and 4). The programs information page deals only with free software offered by the Testbed. The programs are grouped into categories for types of computers that the programs are compiled, along with information on how to ftp the programs back to the end users computer (Example 5).

The heart of the Testbed is the acquisition of satellite data. From the Testbed homepage, the user selects the "access to data system" icon. This

selection will take the user to the World map and allow them to select and area they would like coverage. By simply clicking on the area of the map that interests you, and new map will be created(Example 6). Once the query information map appears, the user can then select a region in that map to get the latitude and longitude of the region the satellite image will cover. (Examples 7 and 8).

Once a selection has been made the search parameters page will appear and the user must fill out the following information: The start/ stop dates of the selection, what type of data sets the user is wanting to search -- HRPT, GAC, and GOES, and finally, the satellite number or numbers to use for the final search (Example 9).

The browse image page will be called once the search is completed and the user will be able to select which images he or she would like to view (Example 10). The user can view the browse image in the small scale or can click on the image to zoom in and get a closer look as to the coverage. By clicking on the filename, the user can continue to order the image (Example 11).

Depending on the type of data being ordered, the geo-registering options page will give the user what resolution values to use for that

particular data set. The user will then decide what size the return image should be, the type of images returned, the map projection along with several other options to produce a finished image.

After the user has placed an order, the Testbed will bring up the order list page that will confirm the data sets ordered and ask the user to place the order (Example 12). Throughout the whole process the user has the options to go back to any page that they might want to review. After an order has been completed, the Testbed will mail the user and tells them their order has been completed and how to pick up the images.

Conclusion:

In the third quarter we should learn more about the type of users that will be accessing the Testbed. It is our thoughts that, users will be more from home net servers than from the science communities. That the users will be interested in current data more than past data sets, and that the average user will be college age or younger. A "GIF" format button has been added to see how many users will want the images returned in this format confirming the home market over the scientific community. To gain access to the Testbed homepage, contact Tim Kelley kelley@jester.colorado.edu.

EOSDIS Testbed Satellite Data System

This System is currently under construction.

Welcome to the University of Colorado. To better understand this system please use the icons below to find out about each data set, then place your order.

Access the data system

mage Types:

olar Orbiting (POES) AVHRR:
IRPT data are full resolution image data transmitted to a ground station as they re collected. LAC are also full resolution data, but recorded with an on-board ape recorder for subsequent transmission during a station overpass. GAC data rovide daily subsampled global coverage recorded on the tape recorders and then ansmitted to a ground station.

iOES satellite images provide a full disk view of the Earth.

For more information on one of these image types click on the corresponding icon.

For information on using this system.

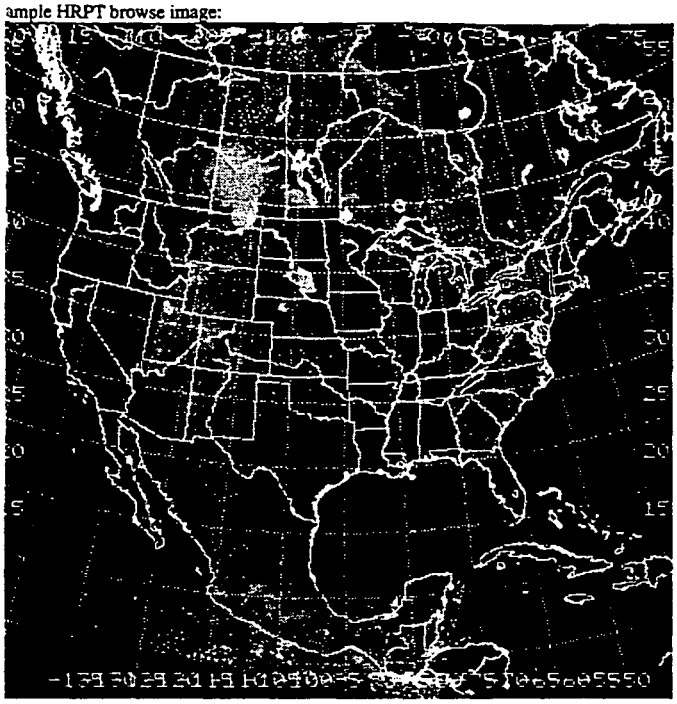
age design by: -- Tim Kelley -- Jason Westphal -- Mark Koch -- David Mayfield

riginally established under NASA's Advanced Information Science Research rogram (AISRP) with Joe Bredekamp and Glen Mucklow managers. Present nding from NASA's Mission to Planet Earth as part of the Earth Observing ystem Data and Information System through the Earth Science and Data ystems Office at Goddard Space Flight Center. Thanks to H.K. Ramapriyan, aren Moe and others on the ESDIS staff for their continued interest.

Example 1

HRPT/LAC Information Page

ample HRPT browse image:



HRPT--High Resolution Picture Transmission

HRPT data are full resolution image data transmitted to a ground station as they are collected. The average instantaneous field-of-view of 1.4 milliradians yields a HRPT ground resolution of pproximately 1.1 km at the satellite nadir from the nominal orbit altitude of 833 km (517 mi).

NVENTORY

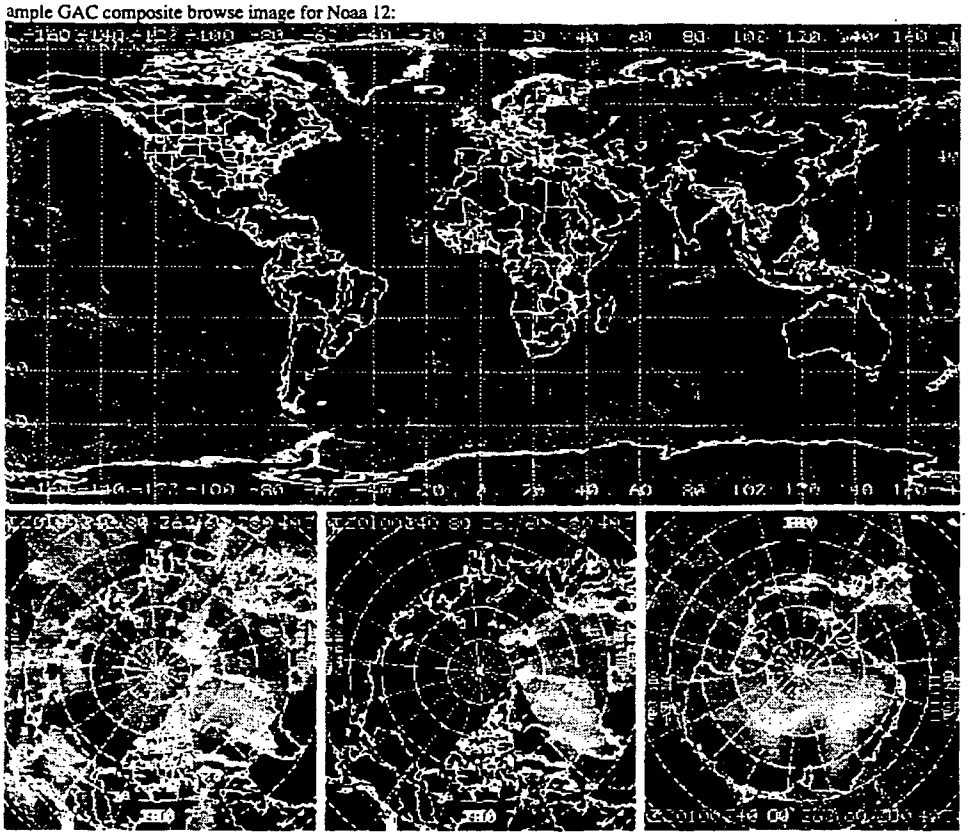
nages are available for the following date regions:

OAA 09 -> 09/15/94 - 10/15/94
OAA 11 -> 10/31/91 - 09/14/94
OAA 12 -> 10/31/91 - 06/09/95
OAA 14 -> 01/27/95 - 06/09/95

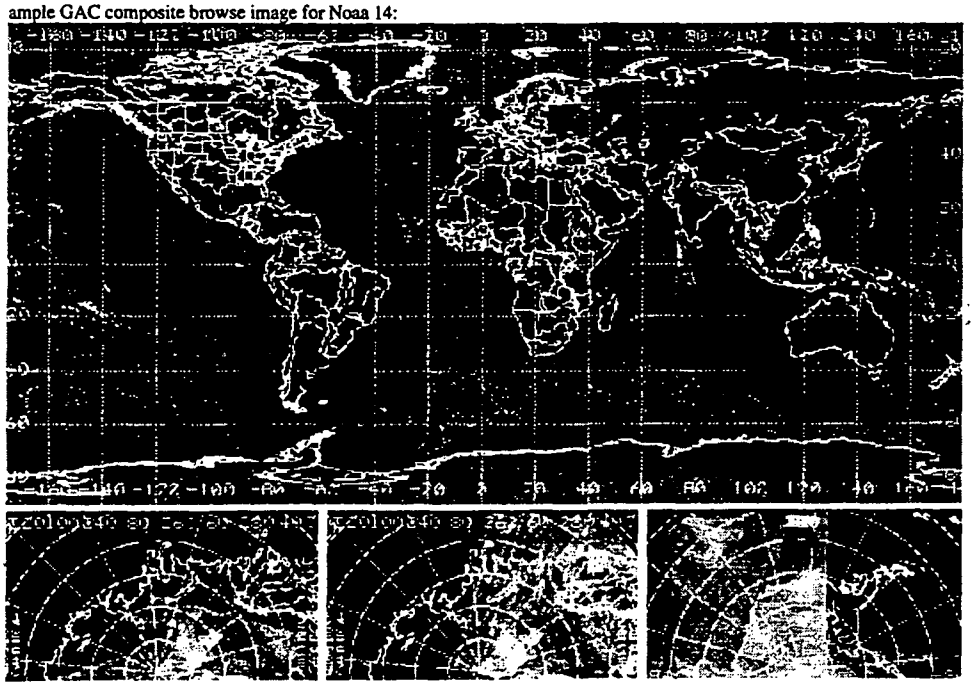
AVHRR guide (HRPT/LAC/GAC).

;AC Information Page

ample GAC composite browse image for Noaa 12:



ample GAC composite browse image for Noaa 14:

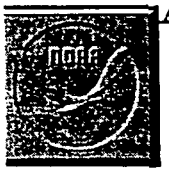


;AC–Global Area Coverage

;AC data are derived from a sample averaging of the full resolution AVHRR data. Four out of every five samples along the scan line are used to compute one average value and the data from only very third scan line are processed, yielding 1.1 km by 4 km resolution at the subpoint.

nages are available for the following date regions:

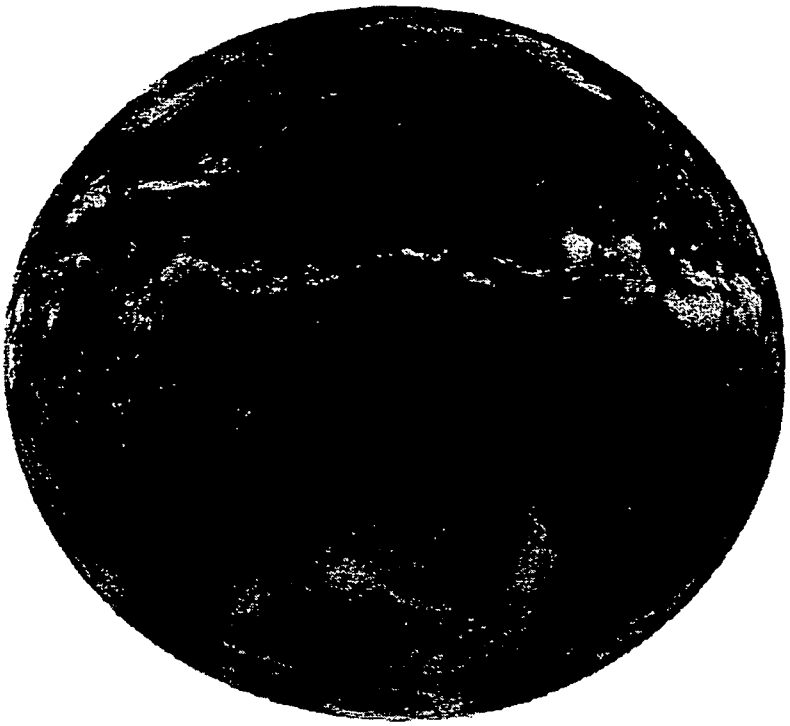
ıll Satellite Data will be current October 1, 1995
IOAA 09 -> 11/29/94 - 04/14/95
IOAA 12 -> 11/28/94 - 05/26/95
IOAA 14 -> 01/23/95 - 05/26/95



AVHRR guide (HRPT/LAC/GAC).

GOES Information Page

ample GOES browse image:



ieostationary Operational Environmental Satellites (GOES)

iOES satellite provide the kind of continuous monitoring necessary for intensive data analysis. They circle the Earth in a geosynchronous orbit, which means they orbit the equatorial plane of the arth at a speed matching the Earth's rotation. This allows them to hover continuously over one position on the surface. The geosynchronous plane is about 35,800 km (22,300 miles) above the arth, high enough to allow the satellites a full-disc view of the Earth. Because they stay above a fixed spot on the surface, they provide a constant vigil for atmospheric "triggers" for severe weathe onditions such as tornadoes, flash floods, hail storms, and hurricanes. When these conditions develop the GOES satellites monitor storms and track their movements.

iOES satellite imagery is also used to estimate rainfall during the thunderstorms and hurricanes for flash flood warnings, as well as estimates snowfall accumulations and overall extent of snow over. Such data help meteorologists issue winter storm warnings and spring snow melt advisories. Satellite sensors also detect ice fields and map the movements of sea and lake ice.

NVENTORY

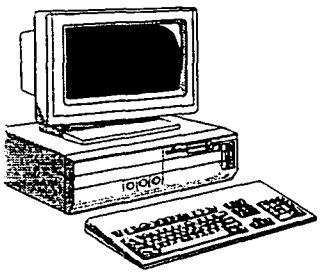
nages are currently available for the following date region:

iOES -> Currently only the present Month
urrent naming convention: 000 = full disk GIX,GWX, GVX = IR, WaterVapor, Visible.
ollowed by, Calendar date, Time of image, and image size.
XAMPLE:
00-GIX.Jul_27_95_01.15.956x773
ull IR—Date—Time—Size

GOES Mission Overview from NOAA

?rograms Information Page

mage Navigation and Processing Software



NVENTORY

he following programs are free and are updated on a regular basis.

facintosh Programs

nageWorkshop1_0.sea.hqx
nagic.9d65.01.hqx

BM PC Programs

ptcap.zip
ndisp77.zip
vdemo10.zip
pic46.zip

INIX Programs

iapfile.tar.Z
avigation.tar.Z
dvi.tar.Z
ho.decstation.2.0.7b.tar.Z
ho.hp700.2.0.7b.tar.Z
ho.sgi-indigo.2.0.tar.Z
ho.sparc.2.0.7b.tar.Z
now.tar.Z

ll of the programs can be found on **jester.colorado.edu (128.138.106.36).**

o retrieve the programs all you must do is:

tp jester.colorado.edu, 128.138.106.36

ogin: as anonymous.
assword is programs@jester.colorado.edu.

d to the **PROGRAMS** directory and get the programs you need.

Example 5

Worldmap

Please select a general region of interest

You can select a region by clicking on the map.

You may also skip the map input section and go directly to a text entry page

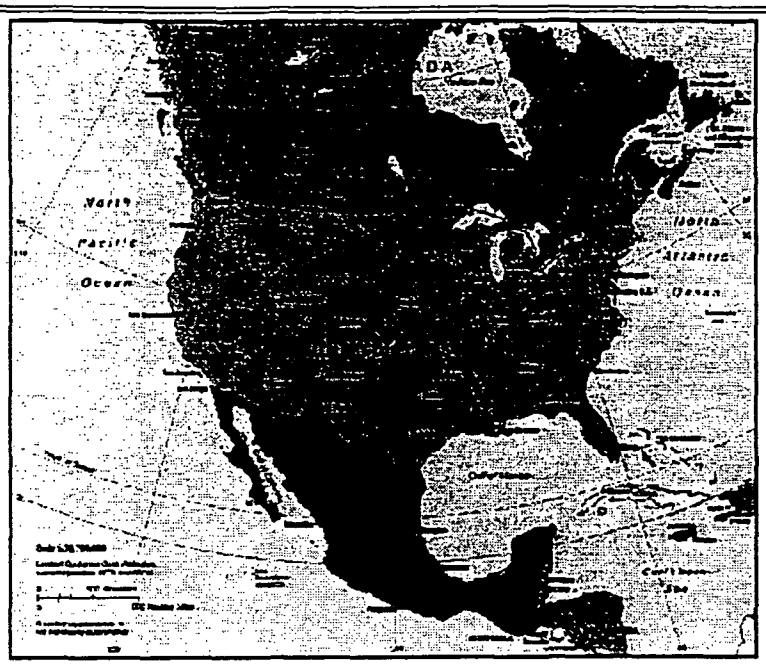
Back To:

Home

Example 6

Query Information -- North America

Enter lat/lon by clicking on map



Back To:

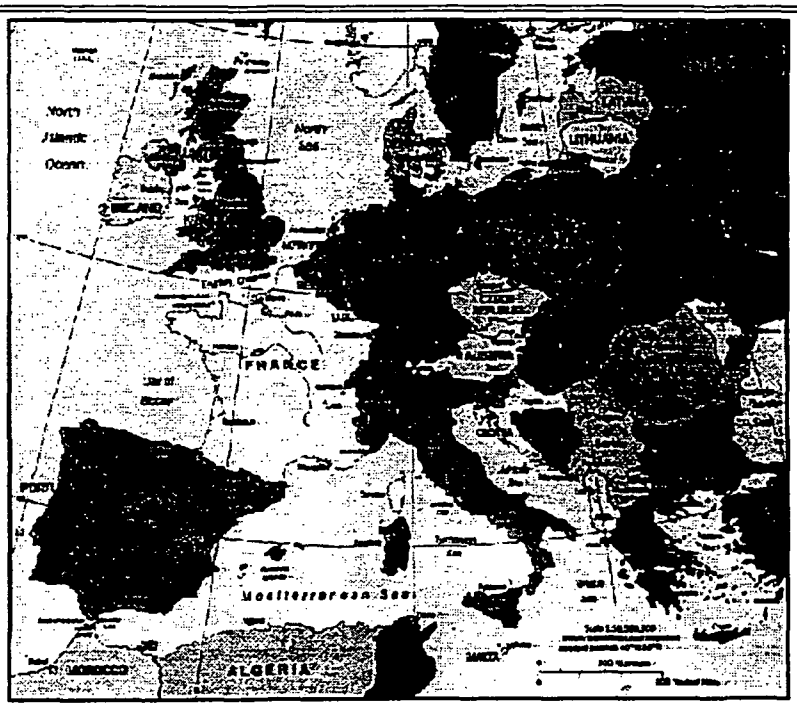
Home

World Map

Example 7

Query Information -- Europe

Enter lat/lon by clicking on map



Back To:

Home

World Map

Example 8

Search Parameters

Please input the following -- Date Range, Dataset, Satellite Id

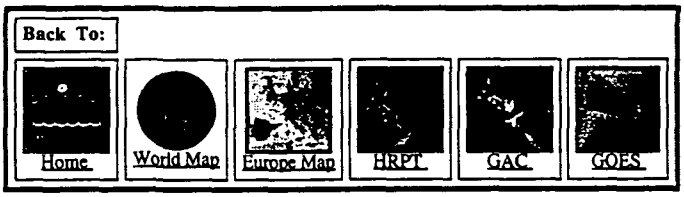
Latitude:[(+/-)xx.xx] 46.0 (+ *North*) (- *South*)
Longitude: [(+/-)xxx.xx] 2.0 (+ *East*) (- *West*)

Start Date:[*yy/mm/dd*] yy/mm/dd
End Date:[*yy/mm/dd*] yy/mm/dd

AVHRR Dataset: ☐ GAC ☐ LAC / HRPT
GOES Dataset: ☐ GOES
NOAA Satellite Id: ☐ 9 ☐ 11 ☐ 12 ☐ 14

Submit Query

Back To:



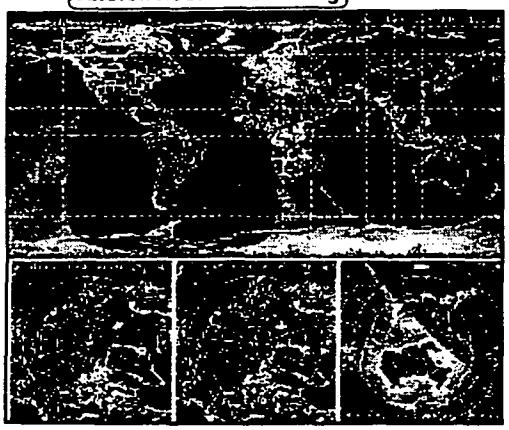
Example 9

Browse Images

Click on image for larger view.

- To Add an image to your order list click on the corresponding button.
- To return to browse menu use the 'Browse Menu' button at the bottom of the page.

◆ Add 12.G.GAC.95.85.12.1627.g to order list



Back To:

Home | World Map | Browse Menu | HRPT | GAC | GOES

Example 10

GEO-REGISTERING OPTIONS FORM

To add [-- N12.G.GAC.95.05.12.16if --] to your list:
Fill out all information and click 'Add to list' button at bottom.

GAC Resolution Values (km)											
		Range (deg)									
		10.0	13.0	16.0	19.0	22.0	25.0	28.0	31.0	34.0	37.0
Size	256	4.3	5.6	6.9	8.2	9.5	10.8	12.1	13.4	14.7	16.0
	512				4.1	4.8	5.4	6.1	6.7	7.4	8.0
	1024										4.0

Latitude Center Point: 46.0
Longitude Center Point: 2.0

(NOTE: * For Image Size and Range correlation see Resolution table above.)
Image Size: 256x256
Range In Degrees: 10.0

Channels To Process (NOTE: Channels 1&2 Visible, 3 Near Infra-Red, 4&5 Infra-Red):
- Channel 1
- Channel 2
- Channel 3
- Channel 4
- Channel 5

Projection Type: Conic
Additional Options:
- Overlay Map
- Zenith Angles
- Spot/Line File
- Header Off
- 2 Byte Image

Please enter your E-mail address below:
kelley@jester.colorado.edu

Add to List | Clear

Back To: | rowse Menu | rowse Image


Home


World Map


HRPT

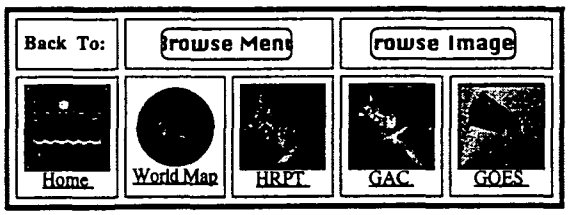

GAC


GOES

Order List

elley@jester.colorado.edu's current order list:
112.G.GAC.95.05.12.1627

ubmit Orde



Example 12