Case Studies

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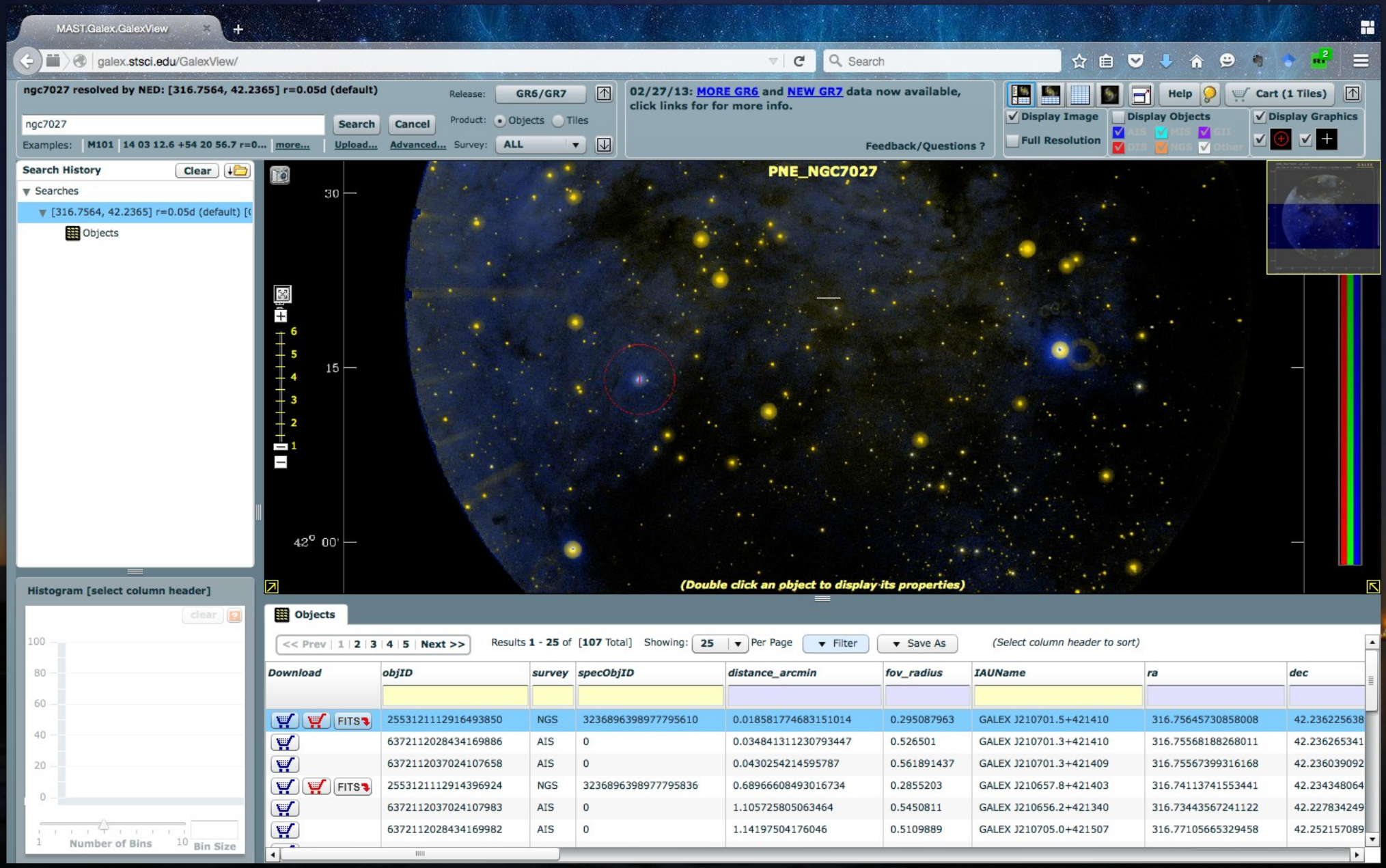
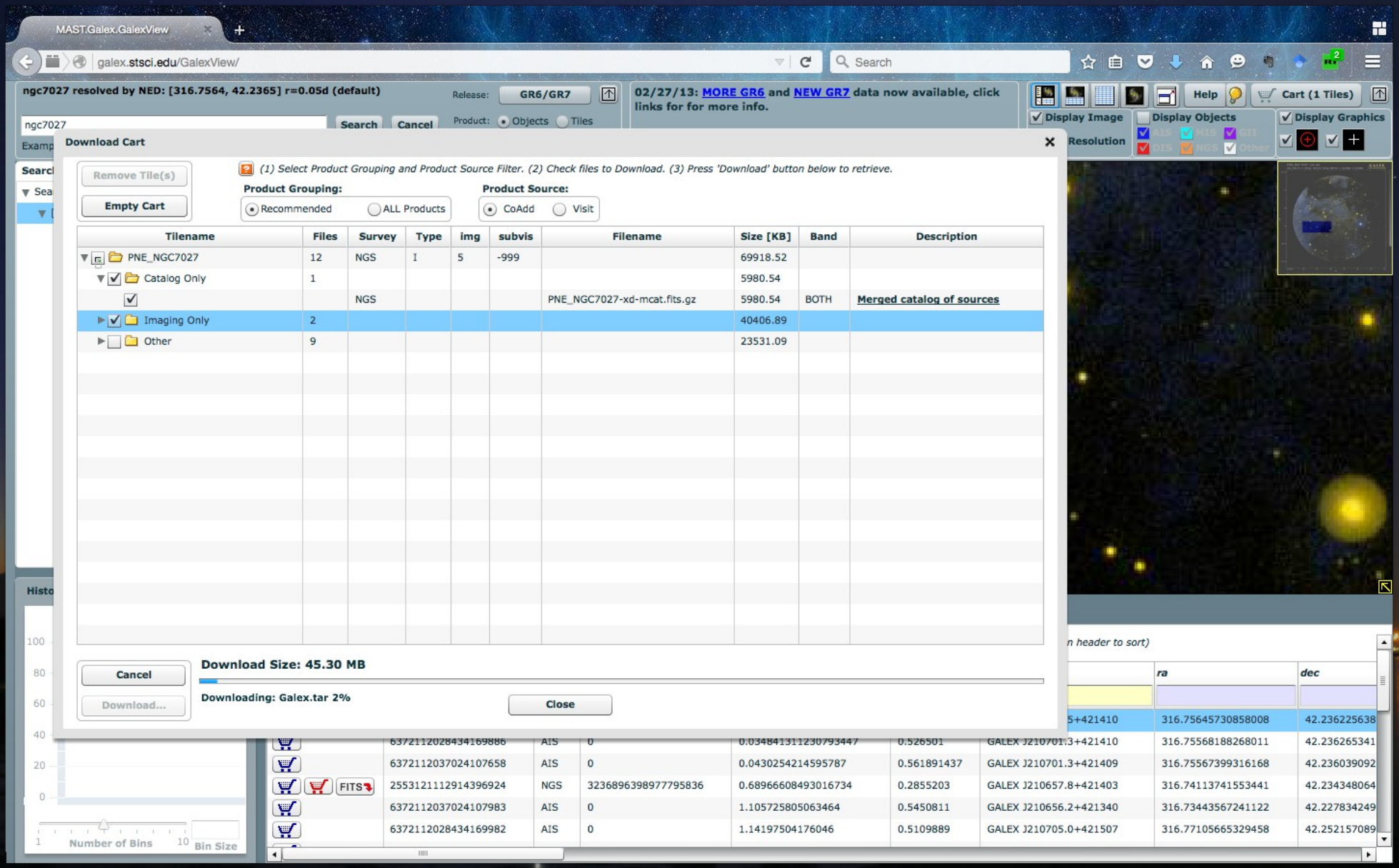
Finding GALEX Data



Downloading GALEX Data



GALEX SQL Search

MAST.Galex.SqlForm

galex.stsci.edu/GR6/?page=sqlform

Barbara A. MIKULSKI ARCHIVE FOR SPACE TELESCOPES

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GALEX GR6/GR7 Home | About GALEX | Getting Started | GalexView | CASJobs | Scan Mode

- Search & Retrieval
- Guest Investigators
- Documentation
- Database Info
- Contributed Software
- Guest Investigator Site
- Related Sites
- Acknowledgments

GalexView:

CasJobs:

SQL Search

Select a sample query...

```
select top 100 p.objid, p.ra, p.dec, p.glon,
p.glat,p.nuv_mag, p.nuv_magerr, p.fuv_mag, p.fuv_magerr,
p.e_bv, pe.mpstype as survey from photoobjall as p,
photoextract as pe where p.photoextractid=pe.photoextractid
and p.nuv_mag>-99 and p.band=3 and p.nuv_fwhm_world<.01
order by p.nuv_mag
```

Sample (simple) query

Output Format HTML CSV VOTable Execute

Load Query Browse... No file selected. Load query... Save query...

To find out more about the database schema, available tables, columns and functions please use the Schema Browser. For an introduction to the Structured Query Language (SQL), please see the Sloan Digital Sky Survey SQL Intro help page.

PLEASE NOTE: Queries submitted from this page are restricted in how long they can run and how much output they return, by **timeouts** and **row limits**. To avoid such restrictions, use CASJobs. The CASJobs Batch Query Services allow SQL access to the GALEX databases. If you register, you receive local storage on the server, where you may create tables using the "select into" statement. We call this storage MYDB. Tables that you create in MYDB may be extracted to FITS, VOTABLE, or CSV using the extract page. You control your MYDB, and you may drop tables in it to make more space. MYDB is a proper database and you may join tables in MYDB with tables in any GALEX target database.

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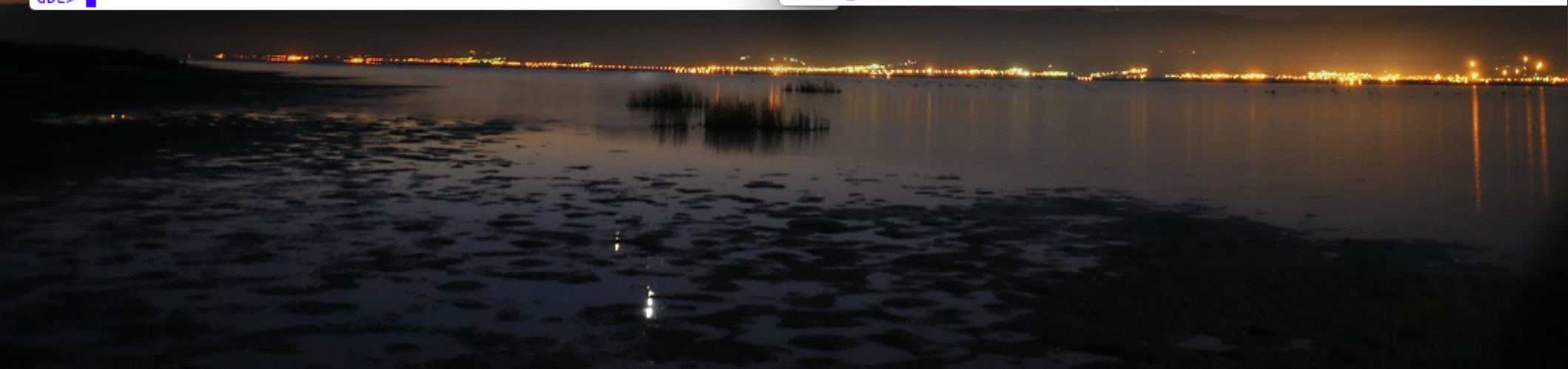
Data Files

2. gdl

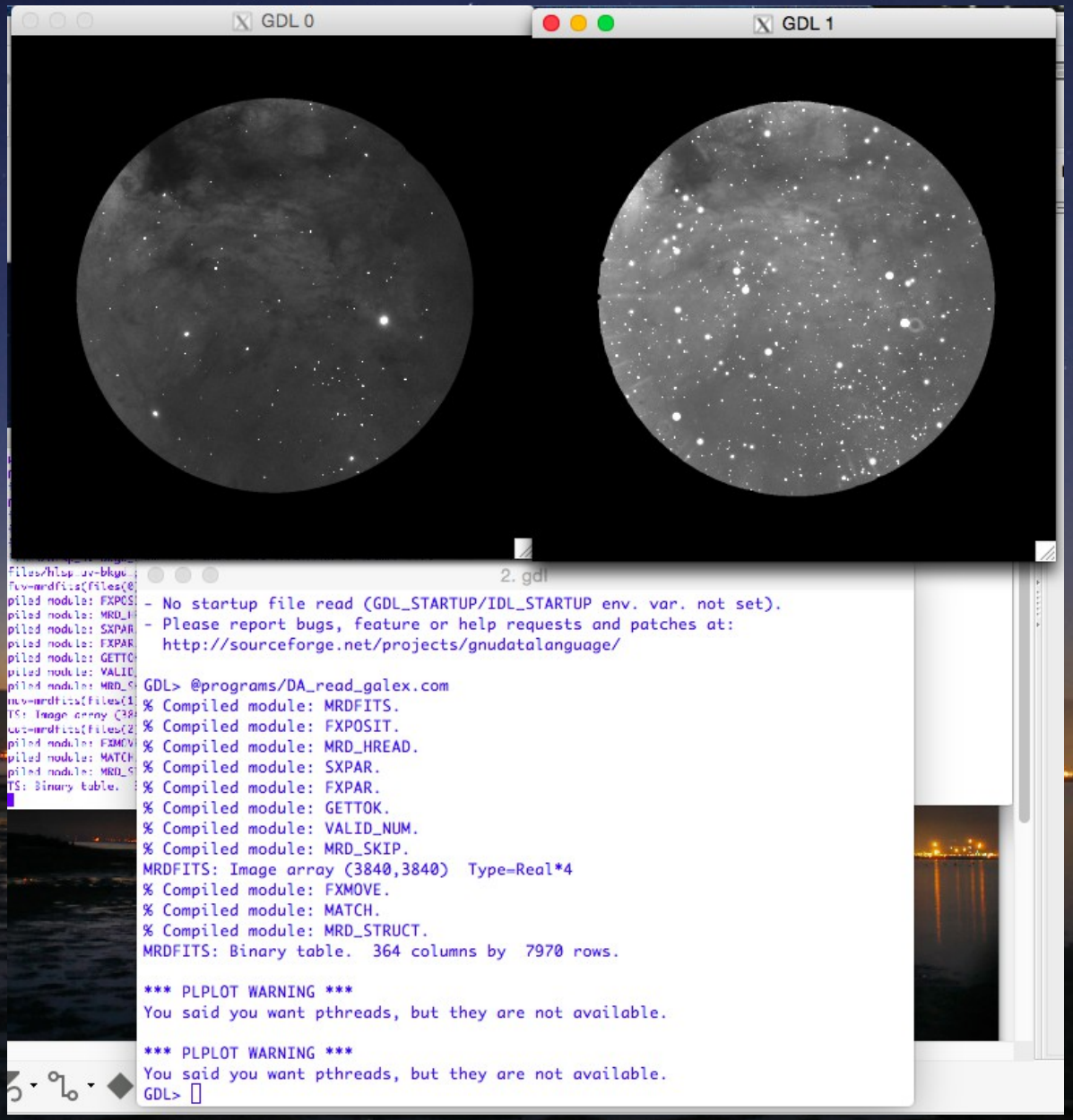
```
% Compiled module: MRD_TABLE.
% Compiled module: MRDFITS.
GDL> files=file_search("data_files/*",count=nfile)
GDL> print,files
data_files/PNE_NGC7027-fd-int.fits.gz data_files/PNE_NGC7027-nd-int.fits.gz
data_files/PNE_NGC7027-xd-mcat.fits.gz
data_files/Q10901010031alif4ttagfcal.fit.gz
data_files/hlsp_uv-bkgd_cobe-iras_map_allsky_100micron_v1_skymap.fits
data_files/hlsp_uv-bkgd_galex_map_allsky_fuv_v1_skymap.fits.gz
GDL> fuv=mrdfits(files(0),0,hdr1,/silent)
% Compiled module: FXPOSIT.
% Compiled module: MRD_HREAD.
% Compiled module: SXPAR.
% Compiled module: FXPAR.
% Compiled module: GETTOK.
% Compiled module: VALID_NUM.
% Compiled module: MRD_SKIP.
GDL> nuv=mrdfits(files(1),0,hdr2)
MRDFITS: Image array (3840,3840)  Type=Real*4
GDL> cat=mrdfits(files(2),1,hdr3)
% Compiled module: FXMOVE.
% Compiled module: MATCH.
% Compiled module: MRD_STRUCT.
MRDFITS: Binary table.  364 columns by  7970 rows.
GDL>
```

2. gdl

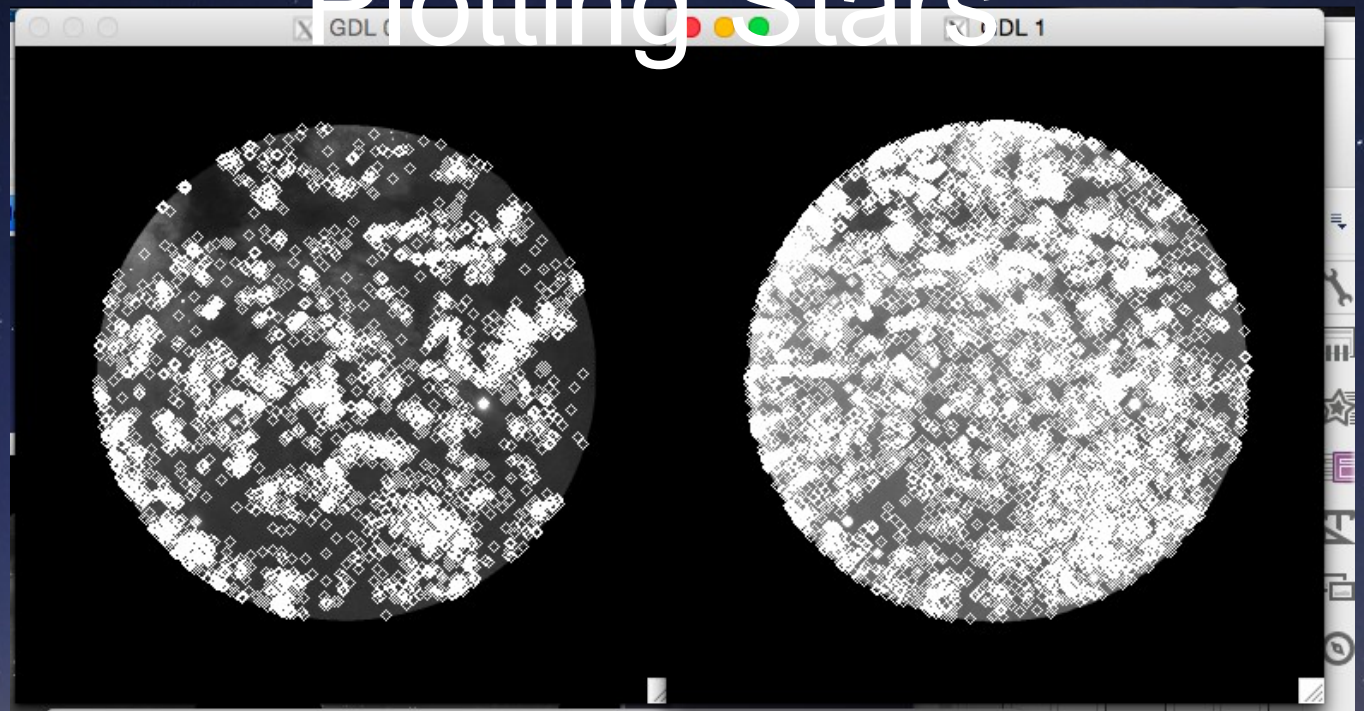
```
GDL> help,/st,cat
** Structure <Anonymous>, 364 tags, data length=5856:
   GGOID_HEX       STRING    '236e82200bd00001'
   GGOID_DEC       STRING    '2553121112914395137 '
   GGOID           LONG      Array[2]
   VSN             LONG                 1
   TILENUM         LONG              7028
   TYPE            LONG                 0
   OW              LONG                 1
   PROD            LONG                 1
   IMG             LONG                 5
   TRY             LONG                 7
   BAND            LONG                 1
   ID              LONG                 1
   SUBVISIT        INT              0
   LEG             INT              0
   ALPHA_J2000     DOUBLE           316.21310
   DELTA_J2000     DOUBLE           41.782152
   ALPHA_J2000_MERGED
                   DOUBLE           316.21310
   DELTA_J2000_MERGED
                   DOUBLE           41.782152
   PROB            FLOAT          -999.000
   SEP             FLOAT          -999.000
   SEP_IMG         FLOAT          -999.000
```



And the Data


GDL 0
GDL 1
2. gdl
- No startup file read (GDL_STARTUP/IDL_STARTUP env. var. not set).
- Please report bugs, feature or help requests and patches at:
http://sourceforge.net/projects/gnudatalanguage/
GDL> @programs/DA_read_galex.com
% Compiled module: MRDFITS.
% Compiled module: FXPOSIT.
% Compiled module: MRD_HREAD.
% Compiled module: SXPAR.
% Compiled module: FXPAR.
% Compiled module: GETTOK.
% Compiled module: VALID_NUM.
% Compiled module: MRD_SKIP.
MRDFITS: Image array (3840,3840) Type=Real*4
% Compiled module: FXMOVE.
% Compiled module: MATCH.
% Compiled module: MRD_STRUCT.
MRDFITS: Binary table. 364 columns by 7970 rows.
*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.
*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.
GDL>

Plotting Stars



2. gdl

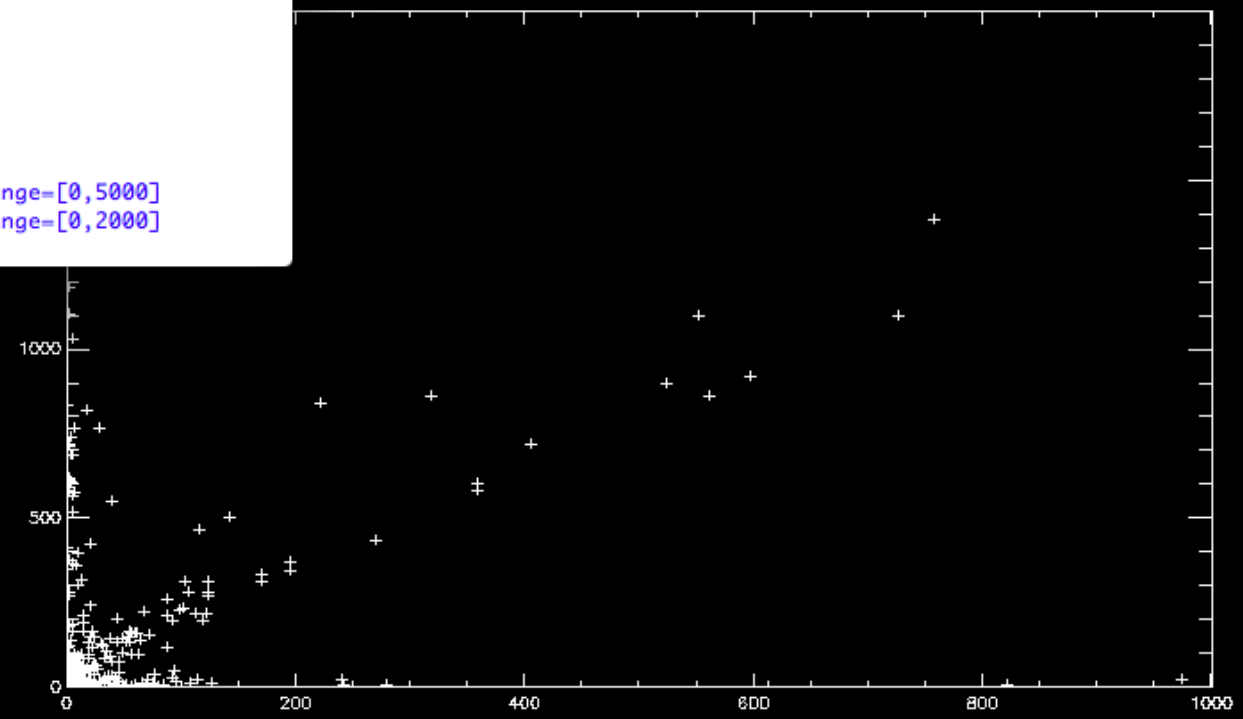
```
- No startup file read (GDL_STARTUP/IDL_STARTUP env. var. not set).
- Please report bugs, feature or help requests and patches at:
  http://sourceforge.net/projects/gnudatalanguage/

GDL> @programs/DA_read_galex.com
% Compiled module: MRDFITS.
% Compiled module: FXPOSIT.
% Compiled module: MRD_HREAD.
% Compiled module: SXPAR.
% Compiled module: FXPAR.
% Compiled module: GETTOK.
% Compiled module: VALID_NUM.
% Compiled module: MRD_SKIP.
MRDFITS: Image array (3840,3840)  Type=Real*4
% Compiled module: FXMOVE.
% Compiled module: MATCH.
% Compiled module: MRD_STRUCT.
MRDFITS: Binary table.  364 columns by  7970 rows.

*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.

*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.
GDL>
```

Plotting Stellar Fluxes

2. gdl

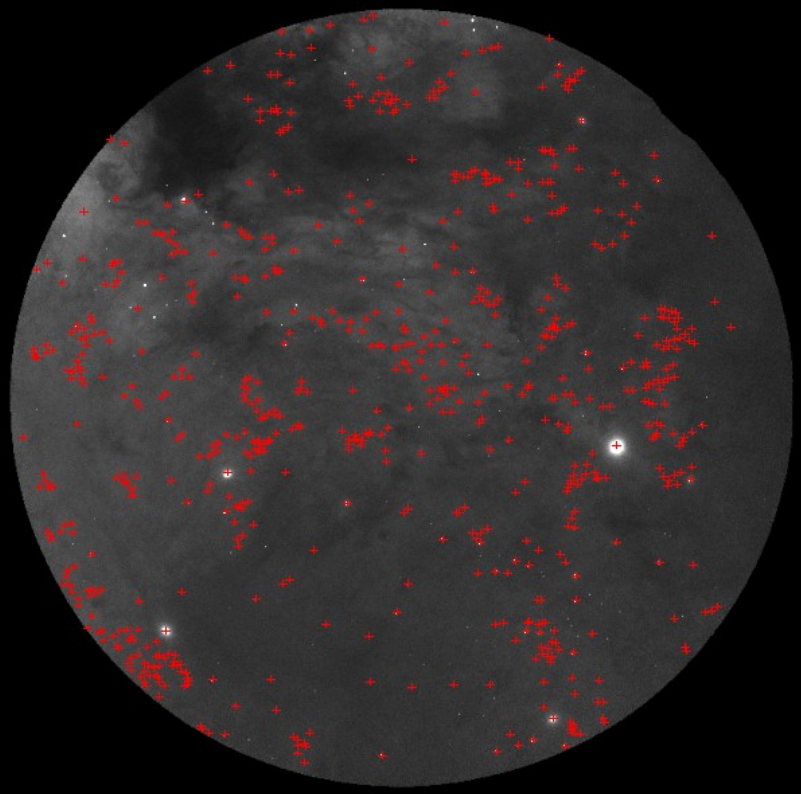
```
% Compiled module: FXMOVE.
% Compiled module: MATCH.
% Compiled module: MRD_STRUCT.
MRDFITS: Binary table.  364 columns by  7970 rows.

*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.

*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.
GDL> x=cat.nuv_x_image
GDL> y=cat.nuv_y_image
GDL> xf=cat.fuv_x_image
GDL> yf=cat.fuv_y_image
GDL> window

*** PLPLOT WARNING ***
You said you want pthreads, but they are not available.
GDL> fuv_flux=cat.fuv_flux
GDL> nuv_flux=cat.nuv_flux
GDL> q=where((fuv_flux gt 0) and (nuv_flux gt 0))
GDL> plot,fuv_flux(q),nuv_flux(q),/psym
GDL> plot,fuv_flux(q),nuv_flux(q),/psym,xrange=[0,2000],yrange=[0,5000]
GDL> plot,fuv_flux(q),nuv_flux(q),/psym,xrange=[0,1000],yrange=[0,2000]
GDL>
```

GDL 0



Finding Stars

2. bash

```
DA_find_ps.pro     DA_read_galex.com
$vi programs/DA_find_ps.pro
$mv programs/DA_find_ps.pro programs/DA_find_ps.com
$vi programs/DA_find_ps.com
$cat programs/DA_find_ps.com
files=file_search("data_files/*",count=nfile)
fuv=mrdfits(files(0),0,hdr1,/silent)
nuv=mrdfits(files(1),0,hdr2)
cat=mrdfits(files(2),1,hdr3)
plot,fuv,psym=3
sky,fuv,skymode,skysig
find,fuv,x,y,flux
window,xs=768,ys=768
tv,bytscl(rebin(fuv,768,768),0,.01)
plot,/noerase,pos=[0,0,1,1],xrange=[0,3839],yrange=[0,3839],$
        xstyle=5,ystyle=5,x,y,psym=4
ans=''
read,"waiting for input",ans
tv,bytscl(rebin(fuv,768,768),0,.01)
for i=0,129 do begin &  plots,x(i),y(i),psym=1,col=255 & wait,0.1 & endfor
ans=''
read,"waiting for input",ans
q=where(cat.fuv_flux gt 0,nq)
tv,bytscl(rebin(fuv,768,768),0,.01)
plots,cat(q).fuv_x_image,cat(q).fuv_y_image,$
        psym=1,col=255
wait,5
plot,histogram(cat(q).fuv_flux,min=0,bin=1,max=20),psym=10
read,"waiting for input",ans
plot,/noerase,pos=[0,0,1,1],xrange=[0,3839],yrange=[0,3839],$
        xstyle=5,ystyle=5,x,y,psym=4,/nodata
q=where(cat.fuv_flux gt 15,nq)
tv,bytscl(rebin(fuv,768,768),0,.01)
for i=0,nq-1 do begin &  plots,cat(q(i)).fuv_x_image,cat(q(i)).fuv_y_image,$
        psym=1,col=255 & endfor
$
```

GDL 0