NGBROWSE: A User's Guide

1. Introduction

NGBROWSE is a UNIX command line environment which allows users to do remote queries on the data tables available at the HEASARC[1], to select tabulated information and to return data products. This command line environment is similar in function to the older "BROWSE" command-line environment which was accessible via a restricted open login to the HEASARC's legacy.gsfc.nasa.gov machine.

Using NGBROWSE, users can select a database for queries, search the database for an object by coordinates or by object name (using either the SIMBAD or NED name resolvers) or table parameters, and filter the database on database parameter values and save the results to a plain text file. NGBROWSE is complementary to the W3BROWSE web interface (see `http://heasarc.gsfc.nasa.gov/W3Browse/`) but offers these advantages over the web-based system:

- NGBROWSE commands can be issued from the user's shell, so the characteristics of the shell are also characteristics of NGBROWSE (for example, tcsh has the capability to recall previous commands). This also means that NGBROWSE can be scripted; rather complicated database queries can be performed using simple shell scripts.
- Since NGBROWSE operates in the command line, it is somewhat faster since there is no need for HTML formatting.
- Output parameters and sorting can be easily changed to suit the user's preferences.
- NGBROWSE commands can also be issued in an "NGBROWSE" shell; this shell provides some direct feedback to the user about the database currently selected and the parameters currently being searched

2. Description of the Software

NGBROWSE is a set of perl scripts designed to interact with the HEASRC SYBASE data tables. NGBROWSE uses the same underlying set of routines to query the HEASARC datatables as the W3BROWSE web interface, using commands similar in name and function to those available via the original BROWSE on-line environment (which was accessible via telnet to legacy.gsfc.nasa.gov with the user name "xray"). Query results are returned locally (either to the current working directory, or a directory specified by setting the $BROWSE_DIR environment variable) and displayed

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[1]High Energy Astrophysics Science Archive Research Center

for the user. For each table being queried, the user has the option of accepting the default output format or specifying individual parameters for output.

3. A Sample Session

In the following we run a sample BROWSE session from the machine "barnegat". We query the ROSPUBLIC table to search for public ROSAT observations near the position $\mathrm{RA}_{2000} = 20^h17^m47.20^s$, $\mathrm{Dec}_{2000} = +38°01'58.5''$. User input is represented by **boldface text**. Comments are shown in *italics*.

`barnegat.gsfc.nasa.gov[corcoran]-50:` **cdb rospublic** #*Tell NGBROWSE to change to a specified database; here we use the ROSPUBLIC table*

```
Current database set to rospublic.
Description:
Number of rows:
Last Modified on:

You have a previously-saved results file, rospublic_BROWSE.results.
Sample of 4 entries was created on Wed Apr 12 14:53:58 2000
from a query with
   equinox :2000 AND
   position :04 14 12.00,+28 12 00.0
Current index set to 'dec'.
```

`barnegat.gsfc.nasa.gov[corcoran]-53:` **show dfields** # *see currently defined table fields*

```
DFIELDS is a list of which fields will be displayed.
Typically not set, but can be set to a comma-separated list of
field names: e.g 'name,ra,dec,start_date'

You can use the string "STD" to represent the standard fields normally
returned by a query on this table.  For example, you can set
the DFIELDS to "STD,class", if you want to add the "class" column
to the standard output.
```

`Set to what value?` **seq_id,exposure,ra,dec,name,w3offset** # *set output columns to parameters of interest; include w3offset to see the angular separation between the position of the object of interest and the catalogued entry*

```
    Setting DFIELDS to seq_id,exposure,ra,dec,name,w3offset
```

```
barnegat.gsfc.nasa.gov[corcoran]-54: sc 20 17 47.20, +38 01 58.5
Search of table rospublic around '20 17 47.20, +38 01 58.5'
(equinox 2000) with a radius 60' returns 12 rows

    seq_id      exposure ra          dec         name      w3offset
    ----------- -------- ----------- ----------- --------- --------
  1 RH500341N00    42790 20 16 02.40 +37 12 36.0 CTB 87      53.559
  2 RP900158A00     2526 20 22 07.20 +37 39 36.0 2CG075+00   55.992
  3 RP900158A01     1431 20 22 07.20 +37 39 36.0 2CG075+00   55.992
  4 RH900639N00    57463 20 17 48.00 +38 01 48.0 P CYG        0.236
  5 RH201626A01    28107 20 17 48.00 +38 01 48.0 P CYGNI      0.236
  6 RH201626N00    14241 20 17 48.00 +38 01 48.0 P CYGNI      0.236
  7 RP200154N00       64 20 17 48.00 +38 01 48.0 P CYG        0.236
  8 RH201029N00     6293 20 20 57.60 +38 33 36.0 HD 229041   48.945
  9 RP200057N00     1826 20 19 31.20 +38 43 48.0 V444 CYG    46.526
 10 RP200058N00     1913 20 19 31.20 +38 43 48.0 V444 CYG    46.526
 11 RP200062N00    13811 20 19 31.20 +38 43 48.0 V444 CYG    46.526
 12 RP200063N00     2055 20 19 31.20 +38 43 48.0 V444 CYG    46.526
Default coordinates set to 20 16 02.40,+37 12 36.0.
Previous coordinates set to 04 14 12.00,+28 12 00.0.
```

4. List of commands

Command	Description
bhelp [cmd] [cmd...]	Help
browse [table]	Start the browse shell
cdb database [sample [index]]	Change database
cey year	Change equinox year
cind index	Change the default sort order
csam sample [index]	Change sample
csam sample [index]	Change sample
dall [full] [n-m] [o-p] [q-r] [...]	Display results in keywd/val
dat tablename [full] [n-m] [...]	Display an ascii table
dbhelp [table]	get info on a database
disp [see full help for args]	Display results.
dline [full] [n-m] [o-p] [q-r] [...]	Display results in a table
dpage [full] [n-m] [o-p] [q-r] [...]	Display results in keywd/val
dsam [full] [n-m] [o-p] [q-r] [...]	Display results in a table
esam sample	Erase sample
ldb [mission] [mission...]	List databases (tables)
lparm [table]	List database parameters.
lparm [table]	List database parameters.
lsam	List user samples
mat tablename field1 [field2] [...]	Create (and display) a table
mc [line number]	Mark coordinates as default
ned name/file [radius]	Search by name in a cone
sc position/infile [radius]	Search by position in a cone
sef parameter min [max]	Exclusive filter on a parameter.
show [param] [value]	Show/change current defaults.
sif parameter min [max]	Inclusive filter on a parameter.
simbad name/file [radius]	Search by name in a cone
sn (sname) name (or input file)	Search by name
sn (sname) name (or input file)	Search by name
sort param [down] [full] [n-m] [...]	Sort and display results
sparm parameter min [max]	Search on a parameter.