

NICMOS HISTORY DATABASE AND WEB TOOLS

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ABSTRACT

The history of NICMOS platescale, focus, and coronagraphic hole data has been stored in a database which is accessible via tools on the World Wide Web. The history tool which allows queries on the data, is available to the public.

1. The Database and Data

A convenient way of keeping a history of some of the NICMOS instrument parameters is to put it all in a database, and build web tools to access it. Each dataset is associated with a unique date. These dates tend not to increment in a daily fashion, so for most, the history data applies over a interval of time. Each dataset (defined by date) may or may not have all three parameters (focus, platescale, and coronagraphic hole) populated. In the case where one or more parameters are missing from a particular set, a value of *NULL* is used as a placeholder. The first table in this database holds the NICMOS platescale measurements (units of *arcsec/pixel*), the NICMOS focus positions (units of *mm*), and the NICMOS coronagraphic hole positions (units of *pixel*), and the date associated with the data.

A second table contains dataset names and dates when the observations were taken (*ads_start_time*). Typically, many dataset names will be associated with each *ads_start_time* and the *ads_start_time* increments daily. All of this information has been retrieved from DADS. These dataset names are all in the archive class of *CAL*. A third table is a merger of the first two tables, associating dataset names with a time interval in which the particular NICMOS history parameters apply.

NICMOS HISTORY DATABASE LAYOUT

Column Name	Data Type
Dataset_name	Char
Dads_Date	Datetime
Team_Date	Datetime
Nic1_X	Float
Nic1_Y	Float
Nic2_X	Float
Nic2_Y	Float
Nic3_X	Float
Nic3_Y	Float
Camera1_Focus	Float
Camera1_Focus _Error	Float
Camera2_Focus	Float
Camera2_Focus _Error	Float
Camera3_Focus	Float
Camera3_Focus _Error	Float
Coronographic Hole X	Float
Coronographic Hole Y	Float

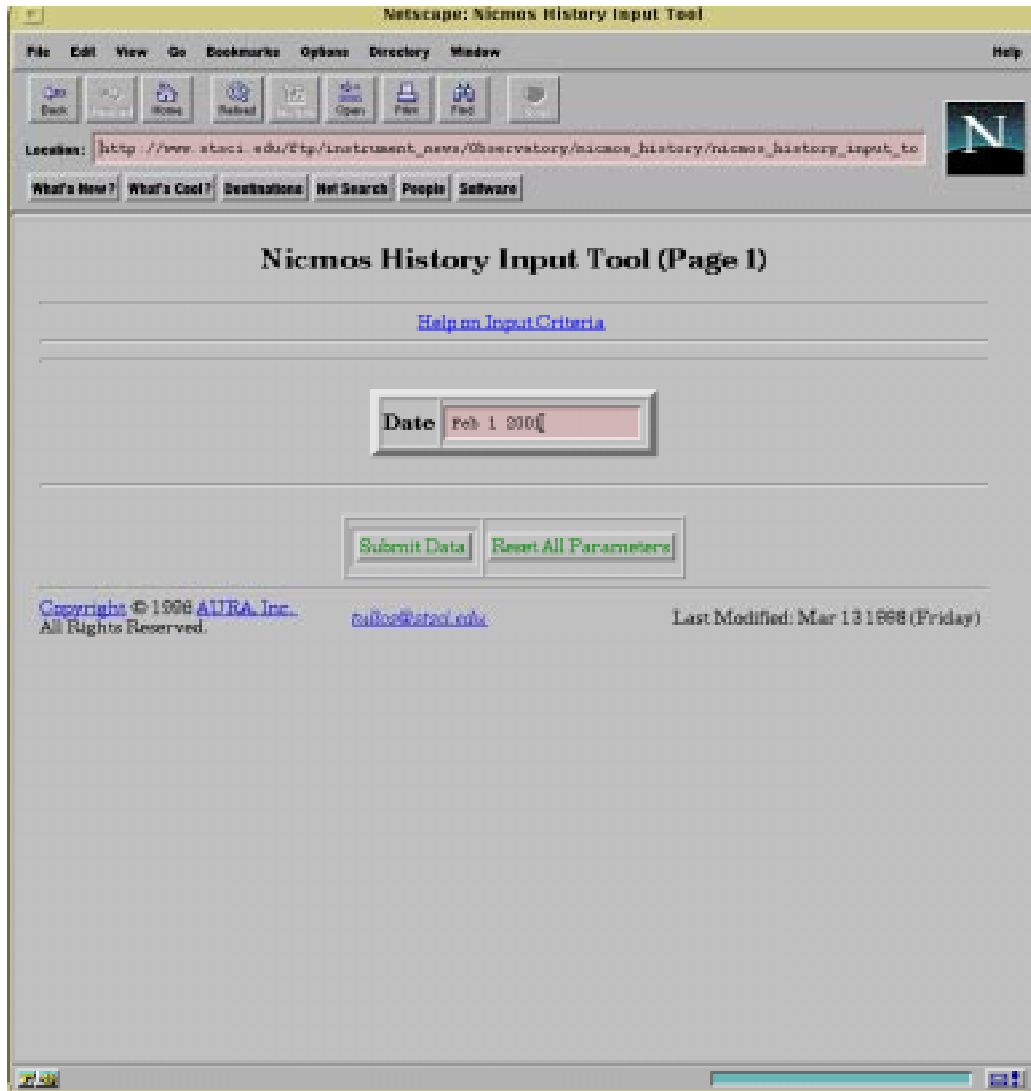
2. The Web Tools

Two separate web tools were built for this task, one for displaying the information in the database, and another for data input. A NICMOS team member will be doing all of the data input, thus access to the input web page is restricted. The NICMOS History Tool pages are open to the public

Input Tool

The input tool allows an operator to install data associated with a particular, unique date. The parameters recorded do not change over a one day period. The tool was designed to allow for installation of partial datasets, and update capability to those datasets at a later time.

Top Level Page



Detailed Input Page

The screenshot shows a Netscape browser window titled "Netscape: Nicmos History". The address bar contains the URL: `http://www.stsci.edu/cgi-internal/dq/nicmos_history/nicmos_history_input_tool1.cgi`. The page title is "NICMOS HISTORY Data Input Tool (Page 2 - Input New Data)". A link for "Help on Input Criteria" is visible. The form contains the following input fields:

Nic1_X Platescale (arcsec/pix)	4.0	Nic1_Y Platescale (arcsec/pix)	5.0
Nic2_X Platescale (arcsec/pix)	.044	Nic2_Y Platescale (arcsec/pix)	.059
Nic3_X Platescale (arcsec/pix)	33.4	Nic3_Y Platescale (arcsec/pix)	43.4
Camera1 Focus (mm PAM)	1.1	Camera1 Focus Error (mm PAM)	1.1
Camera2 Focus (mm PAM)	2.2	Camera2 Focus Error (mm PAM)	2.2
Camera3 Focus (mm PAM)	3.3	Camera3 Focus Error (mm PAM)	3.3
Coronagraphic Hole X (pix)	45.0	Coronagraphic Hole Y (pix)	45.0

At the bottom of the form are two buttons: "Submit Data" and "Reset All Parameters".

This page of the input tool allows for the entry of the platescale, focus, and/or coronagraphic hole information. The data will be associated with the date input on the previous page. A full or partial set of data can be input. If a partial set is supplied, and the full set of data becomes available at a later time, the operator can join the two sets through the update capabilities of the tool, keying on the date.

Results Page

The screenshot shows a Netscape browser window titled "Netscape: Nicmos History". The address bar contains the URL: `http://www.stsci.edu/cgi-bin/external/cgi/nicmos_history/nicmos_history_input_tool2.cgi`. The page content is titled "NICMOS HISTORY Data Input Tool (Page 2 - Results)". Below the title, a message reads "This is the data that you just put into the database". A date field shows "Date Feb 1 2001 12:00:00GMT".

Nic1_x Platescale (arcsec/px)	Nic1_y Platescale (arcsec/px)	Nic2_x Platescale (arcsec/px)	Nic2_y Platescale (arcsec/px)	Nic3_x Platescale (arcsec/px)	Nic3_y Platescale (arcsec/px)
4	5	0.044	0.099	33.4	43.4

Coronagraphic Hole X (pix)	Coronagraphic Hole Y (pix)
45.9	48.8

Camera1 Focus (mm FWHM)	Camera1 Focus Error (mm FWHM)	Camera2 Focus (mm FWHM)	Camera2 Focus Error (mm FWHM)	Camera3 Focus (mm FWHM)	Camera3 Focus Error (mm FWHM)
1.1	1.1	2.2	2.2	3.3	3.3

The results of the input into the database are given back to the operator.

History Tool

The history tool was designed for the general user. Separate data sets for the platescale, focus, or the coronagraphic hole data may be retrieved, or combinations of any three. As mentioned above, the NICMOS history data has been merged and associated with observation names retrieved from DADS. The user may query the database using the observation name(s) as the primary query parameter, or using a date or date interval (as the query parameter). The user would not use both, since one essentially defines the other.

Top Level Page



The screenshot shows the top-level page of the Nicmos History Tool. The browser window title is "Netscape: nicmos history tool". The address bar shows the URL: `http://www.stsci.edu/ftp/instrument_news/observatory/nicmos_history/nicmos_history.html`. The page features a navigation menu with buttons for "What's New?", "What's Cool?", "Destinations", "Net Search", "People", and "Software". The main content area is titled "Nicmos History Tool" and includes a link for "Help on Selection Criteria". Under "Information Selection:", there are three unchecked checkboxes: "PlaneScale", "Focus", and "Coronograph Hole". The "Filename Input Options" section contains an "Observation Name" input field, a link to "Get Multi-File Form", and a "Date Options" section with a "Date: (mmm dd yyyy)" field set to "Feb 2 2001" and an "Observation Date Range" section with "From:" and "Until:" input fields. At the bottom, there are "Submit Query" and "Reset All Parameters" buttons.

History Results

NICMOS PLATESCALE FOCUS CORONOGRAPH HOLE HISTORY

Data Date Feb 1 2001 12:00:00:000AM

Nic1_x Platescale (arcsec/pix)	Nic1_y Platescale (arcsec/pix)	Nic2_x Platescale (arcsec/pix)	Nic2_y Platescale (arcsec/pix)	Nic3_x Platescale (arcsec/pix)	Nic3_y Platescale (arcsec/pix)	Coronograph Hole X (pix)
4	5	0.044	0.099	33.4	43.4	45.9
Camera1 Focus (mm PAM)	Camera1 Focus Error (mm PAM)	Camera2 Focus (mm PAM)	Camera2 Focus Error (mm PAM)	Camera3 Focus (mm PAM)	Camera3 Focus Error (mm PAM)	Coronograph Hole Y (pix)
1.1	1.1	2.2	2.2	3.3	3.3	46.8

[Platescale Description](#)
[Focus Description](#)
[Coronographic Hole Description](#)

[Output Instructions](#)

The results from the query will reflect what query parameters were chosen initially. Observation names with history data for a specific date will be retrieved, or history data spanning an interval of dates (if applicable), will be shown.

3. Conclusion

To access the NICMOS History Tool, enter the following URL:

http://www.stsci.edu/ftp/instrument_news/Observatory/nicmos_history/nicmos_history.html

To access the NICMOS History Input Tool, contact members of the NICMOS Instrument Team.:

http://www.stsci.edu/ftp/instrument_news/NICMOS/nicmos_group.html

Photometry and SAA information may be included in the database in the near future.