ezSkyView Documentation

by

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NASA's SkyView Query Form is developed and maintained
by
The National Aeronautics and Space Administration (NASA)

The SDSS DR7 Finding Chart Tool is developed and maintained
by
The Sloan Digital Sky Survey

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1. Introduction

ezSkyView provides an easier user interface for NASA's SkyView Query Form (NSQF), to create images of astronomical objects or specific portions of the sky. This allows the astrophotographer to quickly see how an intended target will look on his computer screen and imaging CCD. Another use is for creating images to include in your planetarium program, such as TheSky6.

Release 2.0 adds the ability to execute the Sloan Digital Sky Survey (SDSS) Finding Chart Tool (FCT).

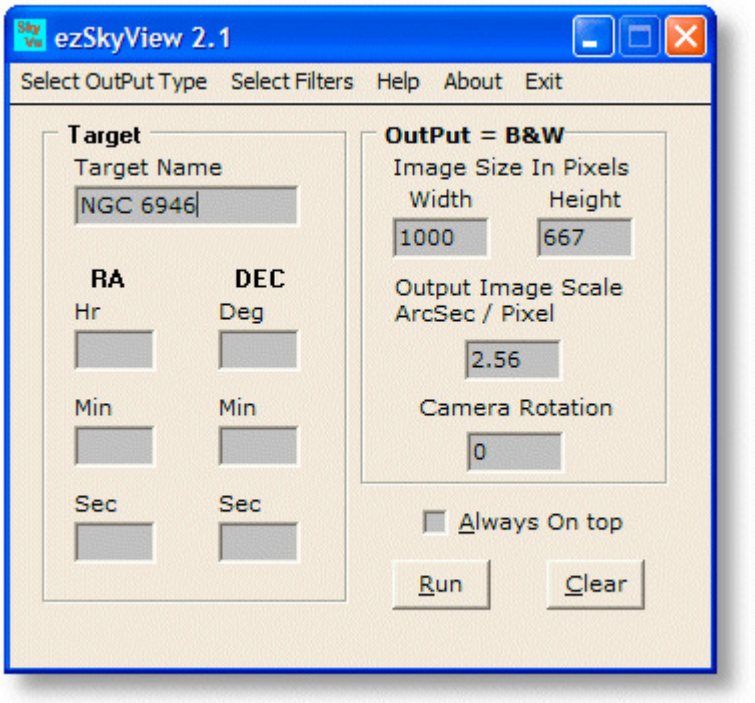
2. How ezSkyView Works

After entering the required data, the program assembles a URL and sends it to the user's default web browser. This URL creates images by executing the NSQF or the SDSS Finding Chart Tool. The FCT also supplies several links for looking up data within the generated image.

3. Special Features

- Easy recovery from errors and faster re-execution. Unlike NASA's SkyView Query Form, it is not necessary to reload the form and reenter all the data.
- Easy data entry. Unlike many Windows programs, it is not necessary to use the Tab key to advance to the next input box. The user may use the tab key, a mouse click, or just hit "enter." Data entry is more efficient because there is no need to leave the keypad... just hit enter.
- The program remembers your last used settings, except for the target name or coordinates.
- The user can set the window position to "Always On Top." This makes the program always visible and on top of all others.

4. Main Screen Items



Target Name

If anything is entered in this field, the RA and DEC fields are ignored. The NSQF uses the SIMBAD or NED name resolver to convert an object name to coordinates. This gives the user many options for entering a target name. Whirlpool Galaxy, M51, NGC 5194, Arp 85, PGC 47404, MCG 8-25-12 and UGC 8493 all convert to the same coordinates.

RA & DEC Coordinates

Enter hours, degrees and minutes as whole numbers. Seconds may have a decimal value.

Image Scale... ArcSec/Pixel

Enter this as an integer or decimal value. The value is used for both the width and height.

Image Size In Pixels

- Enter the height and width as integers.
- About CCD's with rectangular pixels.
  - Enter the horizontal ArcSec/pixel and image width in pixels.
  - Using the horizontal ArcSec/pixel, adjust the vertical pixel count to cover the field of view.

Camera Rotation

Enter this as an integer or decimal value... 0 to 360.

Always On Top

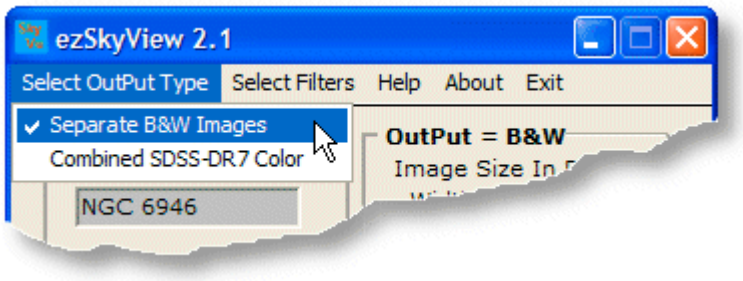
Clicking this check box toggles the *Always On Top* mode on and off.

Clear Button

Clears all the Target fields.

5. Menu Items

Select OutOut Type



Separate B&W Images

The program executes a NASA SkyView web page of black and white images, using the selected filters.

Combined SDSS-DR7 Color

- ezSkyView executes the SDSS DR7 Finding Chart Tool web page. In addition to creating a color image, this web page offers several tools for looking up data on individual objects.
- The SIMBAD or NED name resolver is not used. The user enters the RA and DEC.
- The *Select Filters* menu item is also disabled.
- Camera rotation is not available.
- The SDSS only covers 25% of the sky. Out of coverage requests display the message... "Requested (ra, dec) is outside the SDSS footprint."

Select Filters

The program displays the filter selection screen. See item 6 for details.

Help

The program displays this PDF file.

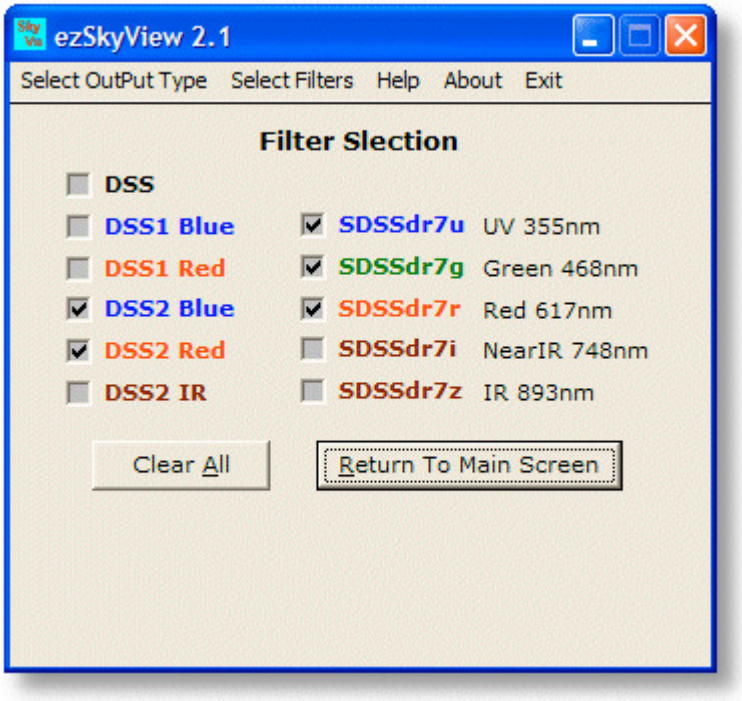
About

ezSkyView displays a screen with basic program information.

Exit

- ezSkyView saves data for recall the next time the program is executed.
- The program closes.

6. Filter Screen Items



DSS

The image scale is 1.7". The POSS E survey covers the Northern Hemisphere with 644 plates.

DSS1 Blue & DSS1 Red *(1st Digitized Sky Survey)*

The pixel scale is 1.7". These surveys are the POSS1 Blue & Red plates from the original POSS survey. They cover the sky north of -30 degrees declination.

DSS2 Blue, DSS2 Red & DSS2 IR *(2nd Digitized Sky Survey)*

The pixel scale is 1.0" with all sky coverage. The Red and Blue data are from POSS2 plate scans. Scanning Schmidt near-IR plates of the sky at 1" generated the DSS2 IR data.

SDSS u, g, r, i & z *(The Sloan Digital Sky Survey)*

The pixel scale is 0.396". A dedicated 2.5-meter telescope at the Apache Point Observatory, New Mexico, digitally acquired the data. The SDSS data only covers about 25% of the sky.