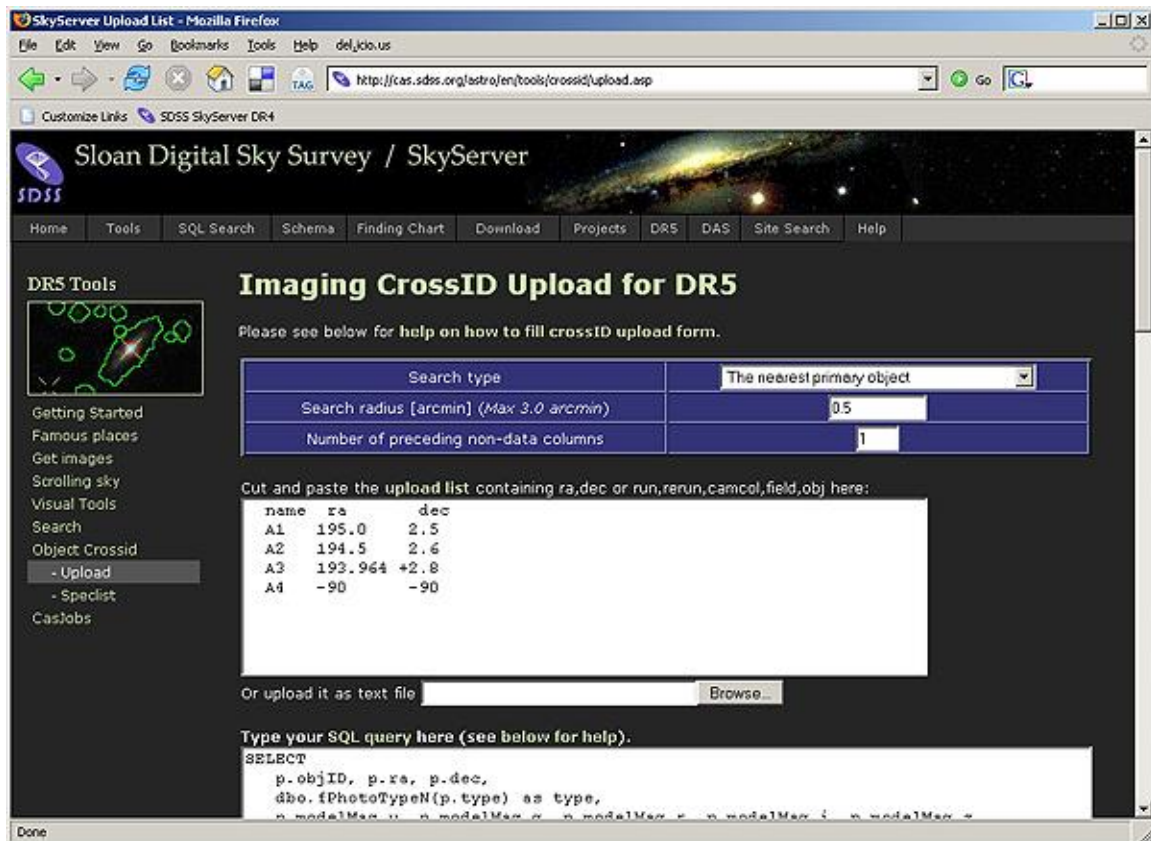


How Do I...

Upload my own data to see what the SDSS knows about those objects?

You can provide a list of your own objects, then see what those objects look like in the SDSS. This is especially useful when looking for optical counterparts to objects seen in other wavelengths. The tool to do this is the Imaging Cross-Identification tool. To get there from the astronomers' home page, click on **Imaging Crossid** link in the first column.

1. The tool will look like this:



The screenshot shows the 'Imaging CrossID Upload for DR5' web interface. The browser window title is 'SkyServer Upload List - Mozilla Firefox'. The URL is 'http://cas.sdss.org/astrofen/tools/crossid/upload.asp'. The page header includes 'Sloan Digital Sky Survey / SkyServer' and a navigation menu with links like Home, Tools, SQL Search, Schema, Finding Chart, Download, Projects, DRS, DAS, Site Search, and Help. The main content area is titled 'Imaging CrossID Upload for DR5' and includes instructions: 'Please see below for help on how to fill crossid upload form.' There are three input fields: 'Search type' (a dropdown menu set to 'The nearest primary object'), 'Search radius [arcmin] (Max 3.0 arcmin)' (a text box with '0.5'), and 'Number of preceding non-data columns' (a text box with '1'). Below these is a text area for pasting an upload list, with a table example showing columns 'name', 'ra', and 'dec' and rows 'A1', 'A2', 'A3', and 'A4'. There is also a 'Browse...' button for uploading a text file and a section for entering a SQL query.

name	ra	dec
A1	195.0	2.5
A2	194.5	2.6
A3	193.964	+2.8
A4	-90	-90

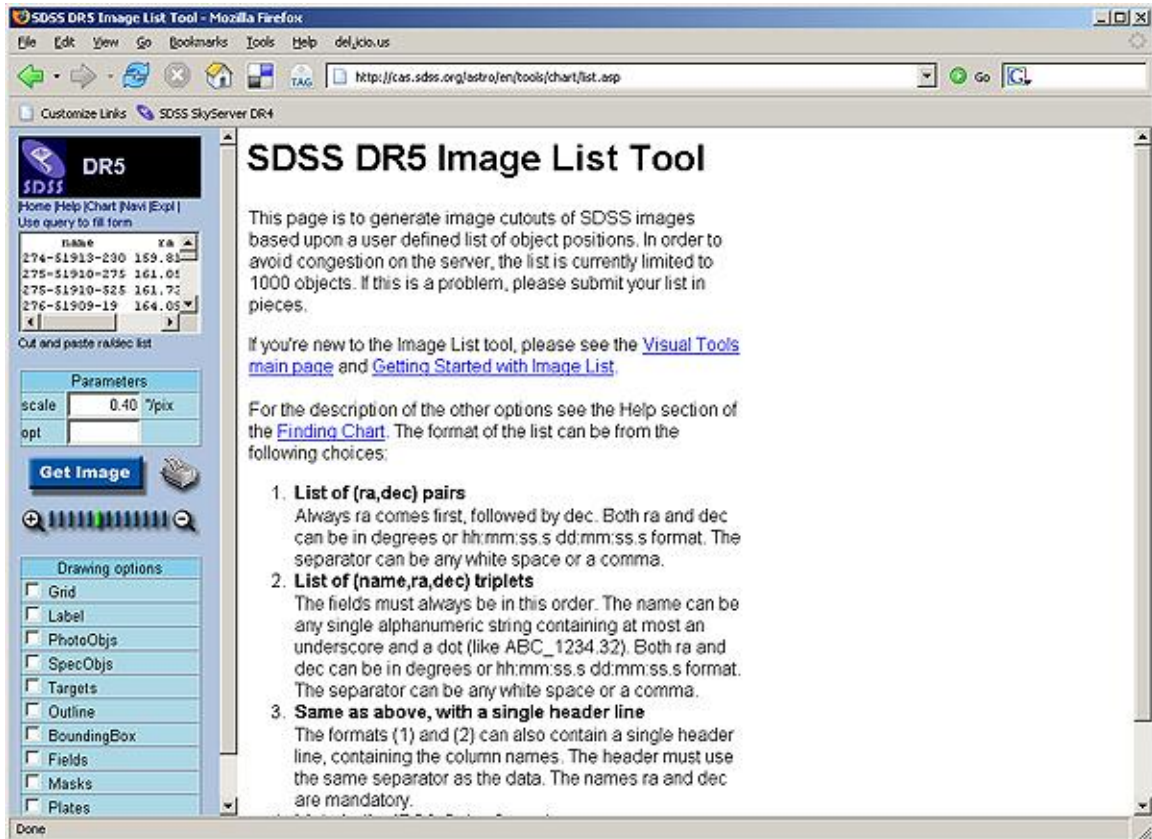
2. In the Search Type dropdown menu, choose the type of search that you want to do. The options are:
- The nearest primary object* – The single primary object nearest to the position that you will enter or upload. *Primary object* means the best single observation of the object; other observations of the same object may be available.
 - The nearest object* – The object nearest to the position that you will enter or upload, whether or not it is a primary observation.

- c. *All nearby objects* – All objects within your specified search radius.
 - d. *All nearby primary objects* – All primary observations of objects within your specified search radius.
 - e. *5-part SDSS ID* – instead of searching by RA and dec, the tool will search based on the SDSS's five-part imaging ID number (run-rerun-camcol-field-object).
3. Enter a search radius (in arcminutes) in the *Search Radius* textbox. This is the radius around each of your objects that the tool will search as it looks for a matching SDSS object. The maximum radius you can enter is 3 arcminutes.
 4. Enter the number of columns that precede your RA and dec in the textbox labeled *Number of preceding non-data columns*. For example, if your data consists of (name, ra, dec), enter 1 in this box.
 5. You can enter your data to cross-match (in other words, the list of objects for which you want to see SDSS data) in one of two ways. Either enter it in the large textbox, or upload a file using the link below. When there is data in the textbox and a file specified in the upload box, the file takes priority.
 6. You can change what types of data the query returns by editing the SQL query just above the *Format* selector. Make sure the photo table/view is aliased as 'p' - for example *photoTag p*. Do not modify the #x and #upload parts of the FROM clause; otherwise your upload will not work.
 7. Choose the format you would like results returned in. HTML will return results as a table in your browser. CSV will return results as a comma-separated value file, which can be opened by many graphing programs.
 8. Click *Submit* to run the query. If you have chosen the default options, the results will look like this:

name	objID	ra	dec	type	modelMag_u	modelMag_g	modelMag_r	modelMag_i	modelMag_z
A1	587726032791995127	194.999836	2.50297	GALAXY	23.167	23.185	21.429	20.297	19.449
A2	587726032791732324	194.498202	2.599335	GALAXY	24.188	23.868	23.222	21.869	22.192
A3	587726015611928832	193.967007	2.798915	GALAXY	19.624	18.268	17.709	17.405	17.306

The first column is the first column of data that you uploaded. If you uploaded more than one column of data before the RA/Dec, all the columns will appear there. The second column is the SDSS object ID of the object closest to the one you specified. If you selected *All nearby objects* instead, you will see all SDSS objects that are in your search radius. The next two columns are the RA and dec of the SDSS object that matches with the coordinates you entered. The next column is the type of the matching SDSS object (STAR or GALAXY), and the next five columns are the SDSS's five magnitudes (u, g, r, i, z).

9. Click on the object ID to go to the **Explore** tool, which will give you more information about the object.
10. Once you have the SDSS object ID, RA, and dec of your objects from the Imaging Cross-ID tool, you can get thumbnail images of what the objects look like in the SDSS using the **Image List** tool. To get to the tool from the astronomers' main page, look under *Advanced Tools*. From the public main page, look under *SkyServer Tools*. The Image List tool looks like this:



11. Copy and paste the object ID, RA, and dec into the textbox in the upper left of the form, just above *Cut and Paste ra/dec list*. Be sure to leave one space between each piece of data. Click **Get Image**. The Image List tool is limited to returning 1,000 objects.
12. A thumbnail image of each result will come up in a new frame within the same window.
13. Click on the thumbnail image to go to the **Navigate** tool entry for that object (link opens in a new window). The Navigate tool will give you an image of the object

and the area around it, which you can zoom in or out of.

14. Click on the object's name (above the thumbnail image) to go to the **Explore** tool entry for that object (link opens in new window). The Explore tool shows complete data for the object, including a spectrum if one was observed by the SDSS.