



CATALOGS

Online Catalogs Overview





Online Catalogs

Overview

This lesson will highlight the various online catalogs that can be useful in the course of your Astronomical Research. While not mandatory for the introductory paper, these resources should be considered for developing an above average paper and should be included in subsequent research projects.

In Astronomy, there are many (MANY) different catalogs. *Centre de Données astronomiques de Strasbourg astronomical Data Center* was developed to provide quick access to major catalogs and provide a means to research an individual item with multiple references in a simplified fashion.

For this lesson, access CDS Strasbourg at: <http://cdsweb.u-strasbg.fr/> and Stelle Doppie at <http://stelledoppie.goaction.it>

This lesson will cover database search engines: CDS, Stelle Doppie, VIZIER, and SIMBAD. For more information on HIPPARCOS and GAIA, consult those video lessons.



Online Catalogs

CDS Strasbourg

CDS is a center that has associated four main database search engines into one central location.

When you click on the CDS link (previous slide), you will see a page that appears like the image below.

The four major collections of data are: CDS Portal, SiMBAD, Vizier, and Aladin

The screenshot shows the CDS Strasbourg website homepage. At the top, there is a navigation bar with links to Portal, Simbad, Vizier, Aladin, X-Match, Other, and Help, along with a search bar for CDS Web pages. The main content area features the CDS logo and the title 'Centre de Données astronomiques de Strasbourg' and 'Strasbourg astronomical Data Center'. Below this, there are four search engines: CDS Portal, SiMBAD, Vizier, and Aladin, each with its own search input field. The page also includes sections for 'Other services' (X-match, Dictionary, Sesame, SimPlay) and 'Hosted services' (ADS mirror, A&A, TIPTOPbase, INES). A 'Latest news' section lists recent catalog additions and network outages.

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Online Catalogs

Stelle Doppie

Go to: <http://stelledoppie.goaction.it>

This catalog blends the Washington Double Star Catalog with other research catalogs accessible at CDS Strausburg.

You can associate your double star with other catalog images, stellar types, proper motion, and other such information via the SIMBAD catalog.

The screenshot shows the Stelle Doppie web interface. At the top, there are navigation tabs: HOME, DATABASE, WORKBENCH, MISC, SETUP, HELP. Below the tabs is a menu: FILE | NOTES | REPORTS | MEASURES | IMAGES | NEIGHBORHOODS | COMPLETE. The main content area displays the title "13510+6819 STTA127AB" in large blue font. Below the title, there is a summary line: "13^h 50^m 59.40^s +68° 18' 55.6" P.A. 63 SEP 87.5 MAG 6.53,8.32 SP K2IV DIST. 102.35 PC (333.87 L.Y.)".

Below the summary, there are several sections:

- Coord 2000**: 13510+6819
- Discov num**: STTA127
- Comp**: AB
- Coord arcsec 2000**: 13 50 59.40 +68 18 55.6
- Date first**: 1844
- Date last**: 2015
- Obs**: 35
- Pa first**: 68
- Pa last**: 63
- P.A. Now (θ)**: 63°
- Sep first**: 71.2
- Sep last**: 87.5
- Sep. Now (ρ)**: 87.5"
- Mag pri**: 6.53
- Mag sec**: 8.32
- delta mag (ΔM)**: 1.79
- Spectral class**: K2IV (yellow-orange)
- Pri motion ra**: -176
- Sec motion ra**: -104
- Pri motion dec**: -058
- Sec motion dec**: +011
- Notes**: N L (See Notes, Linear solution)

There are also sections for "Theoretical Visual Limit" (rPM=0.54), "13510+6819 SYSTEM COMPONENTS" (a table with columns: SHOW NAME, SAO, COORD_2000, DISCOV#, COMP, FIRST, LAST, OBS, PA, SEP, MAG1, MAG2, D_MAG, ORB, CURRENT), and "OTHER CATALOGS AND DESIGNATIONS" (a table with columns: Constellation, SAO, HIP, Tycho2, HD, Distance, last precise pa, last precise sep).

The screenshot shows the welcome page of the Stelle Doppie website. At the top, there is a logo with the text "Stelle Doppie" in blue. Below the logo, it says "Welcome to Double Star Database". Underneath, it says "Search engine to the Washington Double Star Catalog (WDS)".

There is a paragraph of text: "A double star is two or more stars very close to each other. This site lets you easily search data from the WDS, the main catalog for these kind of sky objects. Users contributions and observations are also stored."

At the bottom, there is a login section: "Hello gpboyce" and "Logout". Below that, there is a large blue button that says "Search the database".

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Online Catalogs - SiMBAD

SiMBAD

SiMBAD is principally used to access published papers that are referenced in your WDS historical data such as this example:

WFC1998	Urban, S.E., Corbin, T.E., Wycoff, G.L., Martin, J.C., Jackson, E.S., Zacharias, M.I., & Hall, D.M. AJ 115, 1212, 1998 (Astrographic Cat. 2000)	1998AJ...115.1212U
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Additionally, SiMBAD, as seen in Stelle Doppie, can link stellar images and data for your research

The screenshot shows the homepage of the Centre de Données astronomiques de Strasbourg (CDS). The main navigation bar includes links for Portal, Simbad, VizieR, Aladin, X-Match, Other, and Help, along with a search bar for CDS Web pages. The central area features the CDS logo and the text 'Centre de Données astronomiques de Strasbourg' and 'Strasbourg astronomical Data Center'. Below this, there are four search boxes: 'Object/position', 'Object database' (highlighted with a red rectangle), 'Catalogue database', and 'Interactive sky atlas'. The 'Object database' search box is currently empty. Below the search boxes, there are sections for 'Other services' (including X-match, Dictionary, Sesame, and SimPlay) and 'Hosted services' (including ADS mirror, A&A, and TIPTOPbase INES). A 'Latest news' section is also visible on the right side of the page.

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Online Catalogs - VizierR

VizieR

Allows the user to search for an object by RA/DEC and co-locate data from a variety of other catalogs around that particular position. For example: HIPPARCOS, WDS, and GAIA.

The screenshot displays the VizierR web interface. At the top, there is a navigation bar with links for Portal, Simbad, VizierR, Aladin, X-Match, Other, and Help. The main content area is divided into several sections:

- Search Criteria:** A search bar containing "06016+1635" and "J2000" with a dropdown menu for "arcmin" and radio buttons for "Radius" and "Box size".
- Search Results:** A list of results for "B/wds" (Washington Visual Double Star Catalog) and ".B/wds/wds" (The Washington Double Star Catalog).
- Simple Constraint:** A section for applying constraints to columns, with a table showing columns like "recno", "WDS", "Disc", "Comp", "Obs1", "Obs2", "Nobs", "pa1", "pa2", "sep1", and "sep2".
- Preferences:** A sidebar with options for "max" (50), "HTML Table", "Compute", "Position angle", "Distance (x,y)", "Galactic", "J2000", "B1950", "Ecl. J2000", "default", "Sort by Distance", "Position in:", "Mirrors", and "CDS, France".

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Questions?