

Catalog Access

The catalog web service allows you to submit a query, both through an online form and programmatically. You can access the Guide Star Catalog(s) as well as a number of other catalogs available from MAST.

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Web-forms

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These web forms were built on a publicly accessible API, which you can use to perform your own queries.

API

The API endpoint is: <https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx?Parameters>

To perform a query, you'll need to fill in the **Parameters** with your desired search criteria.



Quotation Marks

Do **not** place quotes around any of the parameter values, or your query will fail. Additionally, the parameters are both case-insensitive and order-insensitive.



Required Parameters for each search type

At a minimum, you must create a query in the style of one of the four following:

Search Type	Required Parameters	Example (using optional parameter defaults : CATALOG=GSC242, FORMAT=VOTABLE)
VO Cone Search	RA=ra(deg) &DEC=dec(deg) &SR=search radius(deg)	<code>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx?RA=83.633083&DEC=-22.0145&SR=0.01</code>
Box Search	BBOX=raMin(deg), decMin(deg), raMax(deg), decMax(deg)	<code>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx?bbox=10, 20, 10.5, 21</code>
STCS Search	STCS=Space Time Coordinate System shape (CIRCLE or POLYGON) Note that a STCS=CIRCLE is the same as a VO ConeSearch	<code>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx?STCS=CIRCLE 83.633083 -22.0145 0.01</code> <code>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx?STCS=POLYGON 180.428742 -18.893042 180.455582 -18.906816 180.488081 -18.858382 180.461245 -18.84461 180.428742 -18.893042</code>
ID Search	ID=catID	<code>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx?id=NBQI004317</code>

You do not need to include these parameters in your search, but you can use them you further filter your results. Some options, like filename and format, alter the results returned to you.

Optional Parameters	Examples
<p>CATALOG=code (Default if omitted is GSC30)</p> <p>For clarity this is a <u>recommended</u> parameter. It WILL change as newer versions of GSC are released</p>	<pre>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? catalog=GSC11&bbox=10,20,10.5,21&format=csv https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? catalog=PS1dr1&ID=134410836341049171&format=HTML</pre>
<p>EPOCH=yyyy.y (Updates ra/dec using proper motion and parallax IF AVAILABLE in catalog)</p>	<pre>original query: https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=83.633083&DEC=-22.0145&SR=0.01&cat=GAIA-dr3&format=html query with updated coordinates: https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=83.633083&DEC=-22.0145&SR=0.01&cat=GAIA-dr3&format=html&epoch=2030</pre>
<p>FORMAT= VOTABLE(default) HTML KML CSV TSV JSON TEXT</p> <p>Note: TEXT is only supported for GSC1, GSC2 and HLA catalogs for backwards compatibility with other services and is NOT recommended</p>	<pre>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? ra=10&dec=20&sr=0.05&format=html</pre>
<p>FILENAME=outputname (directs output to file)</p>	<pre>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? ra=10&dec=20&sr=0.01&format=csv&filename=conesearch- result.csv</pre>
<p>MAXOBJ=n (limits number of entries returned by brightest magnitude)</p>	<pre>original query: https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=83.633083&DEC=-22.0145&SR=0.02&format=html query limited to 10 objects: https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=83.633083&DEC=-22.0145&SR=0.02&format=html&maxobj=10</pre>
<p>MAGRANGE=bright,faint (limits number of entries returned by limits)</p>	<pre>original query: https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=83.633083&DEC=-22.0145&SR=0.02&format=html query limited to specified magnitude range: https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=83.633083&DEC=-22.0145&SR=0.02&format=html&magrange=15.4,17.2</pre>
<p>MINDET=n (minimum number of detections PanSTARRS only)</p>	<pre>https://gsss.stsci.edu/webservices/vo/CatalogSearch.aspx? RA=243.8675309&DEC=42.05&SR=.01&FORMAT=html&CAT=PS1dr1&MINDET=25&MAXOBJ=5</pre>