Simbad

Simbad is a database of astronomical objects (mostly of our Milky Way) that contains information of more than 8 million objects. Simbad is an ideal tool to find suitable objects for N1 and N2.

Parameter search

On the mainpage of Simbad in the left column (**Queries**) click **by criteria** to find the input mask. In the section `Description of the queriable fields` find a description of all parameters and their meaning. For the laboratory courses (basically) only these are required:

- sptypes
- otypes
- dec
- Vmag

Parameter	Explanation	Example
sptype	list all objects with the given spectral type (sptype = 'K0' → 'K0')	sptype = 'K0'
sptypes	list all objects with the given spectral type and its subtypes (sptypes = 'k0' → 'K0III','K0V',...)	sptypes = 'K0'
otype	list only objects of a given type, e.g. Cl* is stars in cluster (otype = 'Cl*' → 'Cl*'	otype = 'Cl*'
otypes	list only objects of a given type and its subtypes (otypes = 'Cl*' → 'Cl*','GlC','OpCl')	otypes = Cl*
dec	Declination in degrees	dec > 60
Vmag	apparent visual brightness (magnitude)	Vmag <= 6

A list of different object types (for `otypes`) in Simbad can be found here.

Input

The parameters are entered in the text field labeled `Enter a search expression`. Multiple parameters are connected with an ampersand **&** like in this example:

```
dec >= 60 & sptypes ='K0' & Vmag <= 5
```

The output will then return all (known) objects of spectral type K0 (and its subtypes) with a visual magnitude of less equal 5mag and a declination of 60 degrees or more.

```
Vmag < 4 & sptypes >= F1 & sptypes <= F9 & dec > 50
```

This query returns stars of spectral type F1 to F9 with declination of 50 degrees or more and a visual magnitude of less than 4mag.

Attention: Before submitting the query (click `Submit query`) change the `Return` format (on the

right)! The default is the `object count` – select **display objects**.

Furter parameters

Further parameters may be useful. The OST telescope hand terminal contains the most common catalogs, so the query can be limited to objects that are in such a catalog. Also the right ascension can be useful, as the stars need to be visible during the night of the observation at the OST.

Parameter	Explanation	Example
cat	list all objects that are in the given catalog	cat = 'HIP'
rah	Right ascension in hours	rah < 22.1