

SSA Interface Summary (Draft)

SSA Query

Required parameters (service must permit these)

<i>pos</i>	(ra,dec; IRCS)
<i>size</i>	diameter of aperture or search region
<i>format</i>	all; graphic; metadata; provider; text/plain, text/xml, text/xml:votable, application/fits, etc.

Optional parameters (service may ignore these)

<i>time</i>	lower,upper (ISO string as in RSM)
<i>bandpass</i>	ID or numerical bandpass in meters (as in RSM)
<i>collection</i>	e.g., survey name (from query response)
<i>id</i>	dataset ID
<i>aperture</i>	aperture size for computed or virtual spectra in degrees (default: size)
<i>verbosity</i>	query response verbosity
<i>rank</i>	all (default), N top items (rank=1 is top item)

Under consideration

<i>keyword</i>	name,name,...
<i>redshift</i>	lower,upper (source attr)
<i>snr</i>	minimum source flux/rms ratio

Query Type

findSED, *findSpectrum*, *findTimeSeries*, all with the same parameters. *findSED* can find anything, others only find Spectrum or TimeSeries.

Query protocol

Any of HTTP GET, POST, SOAP; all with the same parameters

Query Response

Objects appear in the VOTable query response as GROUPed sets of fields, with UTYPE specifying the interface or SSA DM field. Fields marked with a \$ are required output. *findSED* and *find{Spectrum|TimeSeries}* return different tables. A *findSED* may find SEDs, or spectra or timeSeries which are degenerate cases of SEDs. In the latter case SED.NSegments = 1 and SED.SegmentType = {"spectrum" | "timeseries"} however only SED metadata is returned.

All Queries

Rank	highest ranking candidates are best match
Target object	target object metadata (from SSA DM)
\$Format	dataset format
\$Acref	access reference URL

Additional fields (SED)

\$SED object SED object metadata (from SSA DM)

Additional fields (Spectrum or TimeSeries)

\$Dataset object	
\$Coverage object	
Spatial.error	
Spatial.resolution	
Time.resolution	
SpectralCoord.type	
SpectralCoord.resolution	
Flux.type	
Npts	Npts in spectrum or time series

As an example of the usage of GROUP and UTYPE, the field definitions required to include the Dataset object in the query response VOTable would resemble the following:

```
<GROUP utype="Dataset">
  <FIELD name="xxx" utype="Title" ucd="xxx"></FIELD>
  <FIELD name="xxx" utype="Creator" ucd="xxx"></FIELD>
  <FIELD name="xxx" utype="Collection" ucd="xxx"></FIELD>
  ...
</GROUP>
```

Here the fields of the returned query response table are Dataset.Title, Dataset.Creator, and so forth.