

getData Implementation in SPLAT-VO

Margarida Castro Neves

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SPLAT-VO up to now



- ▶ SPLAT is a graphical tool for displaying, comparing, modifying and analysing astronomical spectra.
- ▶ It's part of the STARJAVA collection.
- ▶ Since November 2011 SPLAT-VO is being developed within the GAVO (German VO) project, in cooperation with Petr Skoda, Academy of Sciences of the Czech Republic
- ▶ Goals: increase flexibility of VO part (server selection, queries, metadata), add new VO and scientific features

Features Added in Last Release



- ▶ Manual inclusion of SSAP server
- ▶ Server selection interface
 - ▶ Selection by waveband, data type
 - ▶ User-defined tags
- ▶ Metadata Parameters
- ▶ Simple authentication

New Feature: Server-side manipulations



Server-side manipulations of spectra using getData

- ▶ Motivation: Useful for many applications, e.g. cutouts can reduce size of data transfer
- ▶ Uses reserved getData operation from SSAP Specification (<http://docs.g-vo.org/ssaevolution.html>)
- ▶ Server implementation: GAVO DaCHS
- ▶ Client implementation: SPLAT

- ▶ After a query request, the server response contains an additional table after the results table
- ▶ To perform a `getData` request, client must provide a publisher DID for dataset selection.
- ▶ client may provide additional parameters, for example
 - ▶ `FORMAT` allows the retrieval of a spectrum in chosen format
 - ▶ `BAND` allows cutouts; the band is specified as a interval of wavelengths in meters
 - ▶ `FLUXCALIB` this may select, e.g., a continuum normalized version of a flux calibrated data set.

getData: Server response for queryData request



```
<VOTABLE version="1.2" xmlns="http://www.ivoa.net/xml/VOTable/v1.2" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xsi:schemaLocation="http://www.ivoa.net/xml/VOTable/v1.2 http://vo.ari.uni-heidelberg
/docs/schemata/VOTable-1.2.xsd" xmlns:ssa="http://www.ivoa.net/xml/DalSsap/v1.0">
```

```
  ...
  <RESOURCE type="results">
```

```
    ...
  </RESOURCE>
```

```
  <RESOURCE name="getDataMeta">
```

```
    <TABLE name="generationParameters">
```

```
      <PARAM datatype="float" name="BAND" unit="m" value="">
```

```
        <DESCRIPTION>The spectral range of the cutout</DESCRIPTION>
```

```
        <VALUES>
```

```
          <MIN value="3.3696e-07"></MIN>
```

```
          <MAX value="8.7662e-07"></MAX>
```

```
        </VALUES>
```

```
      </PARAM>
```

```
      <PARAM arraysize="*" datatype="char" name="FLUXCALIB" value="">
```

```
        <DESCRIPTION>Recalibrate the spectrum to...</DESCRIPTION>
```

```
        <VALUES><OPTION value="relative"/></VALUES>
```

```
      </PARAM>
```

```
      <PARAM arraysize="*" datatype="char" name="FORMAT" value="application/x-votable+xml">
```

```
        <DESCRIPTION>Format to deliver the spectrum in.</DESCRIPTION>
```

```
        <VALUES><OPTION value="text/csv"/>
```

```
          <OPTION value="application/x-votable+xml;encoding=tabledata"/>
```

```
          <OPTION value="application/x-votable+xml"/>
```

```
          <OPTION value="text/plain"/>
```

```
          <OPTION value="application/fits"/>
```

```
        </VALUES>
```

```
      </PARAM>
```

```
    </TABLE>
```

```
  </RESOURCE>
```

```
</VOTABLE>
```

Example: getData Request



```
http://dc.zah.uni-heidelberg.de/flashheros/q/ssa/  
ssap.xml?REQUEST=getData&FORMAT=application/  
x-votable+xml&BAND=6.5e-7/7e-7&PUBDID=ivo:  
//org.gavo.dc/flashheros/q/lsw97/red/f1055.mt
```

Demonstration



Live Demonstration

Further Development



- ▶ SPLAT-VO development is ongoing, other changes are to be expected
- ▶ future plans: obscure implementation
- ▶ We'll gladly consider new ideas and suggestions
- ▶ SPLAT-VO Mailing list:

<http://lists.g-vo.org/cgi-bin/mailman/listinfo/splat-users>

- ▶ SPLAT page at GAVO:

<http://www.g-vo.org/pmwiki/About/SPLAT>