



Prototyping SIA2 Query method

F.Bonnarel (CDS)





Query parameters

- We keep most of the SSA query parameters and
 - add an ASTROMETRICALIB ,
 - suppress the TARGET if not pointed source
- Add a Dataset.Type to constrain on
Type = 2D Image, cube, etc...
- Image generation parameter to drive transformed image: WCS + resolution



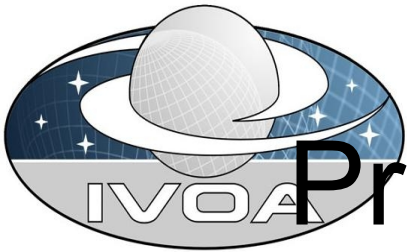
Query parameters

- Regions: getting cone search and rectangular research
- Additional Region request: using ADQL region ?
- INTERSECT like in SIA1.



Query response

- Spatial char will be extended to Error Resolution and Sampling.
- Spectral Char is reduced in case of simple 2D image
- WCS or Mapping model package.



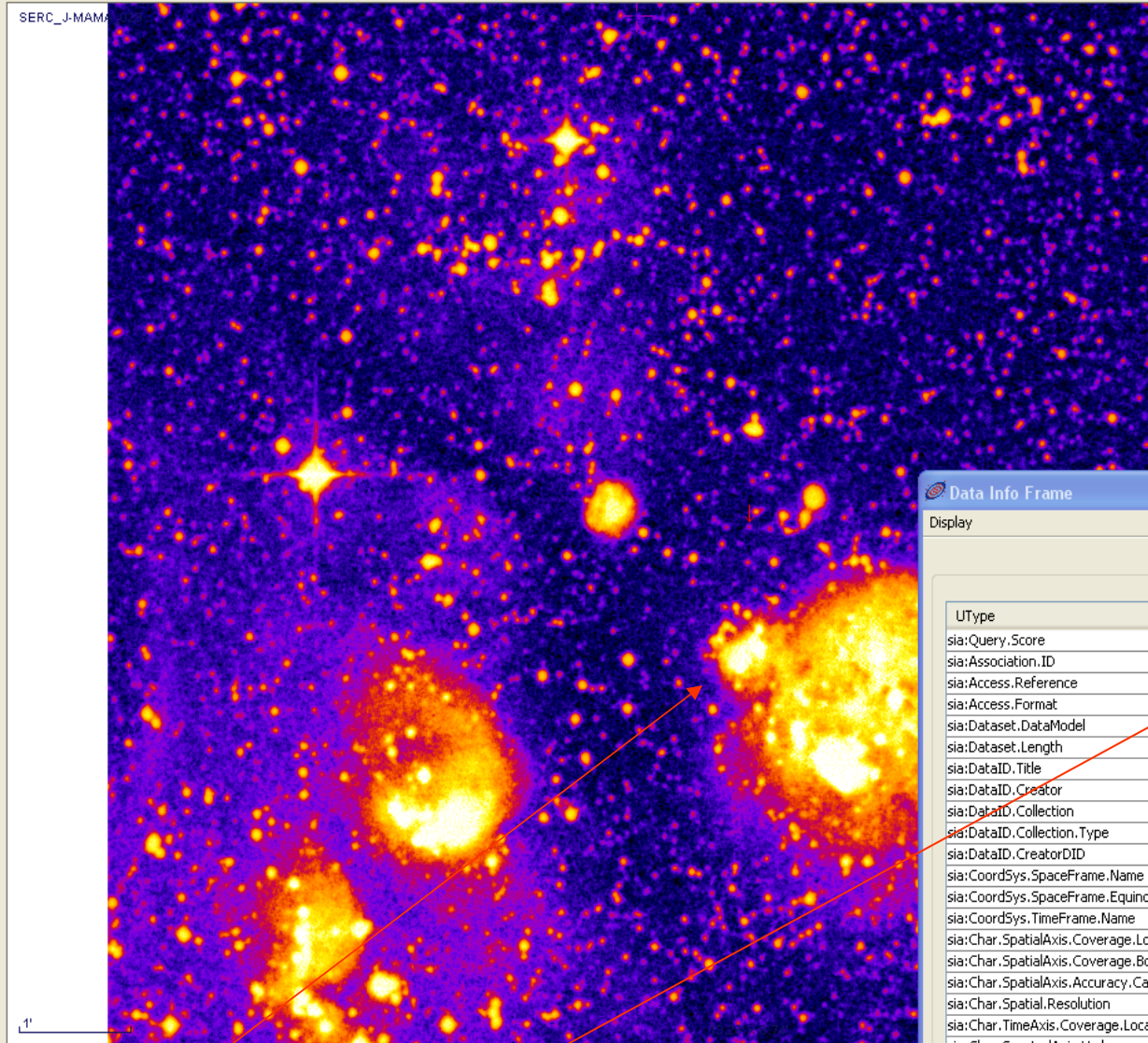
Prototype in Aladin server

- Mainly focused on new query response
- Basic query parameters
- Look at URL

<http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=qualifier&mode=sia2&POS=al,del&SIZE=0.0>

To get an idea of the query response

- Launch Java webstart version of Aladin Beta version to use the sia2 query response and visualize metadata (utypes and ucds) for data discovery.



Others

Image servers

-
-
-
-
-
-
-
-
-
-

Catalog servers

-
-
-
-
-
-
-

Experimental SIA2 Aladin

Fill in all these fields and press the SUBMIT button

Target.....

Radius

- IRAS-IRIS_25MU_I002B2HO
- IRAS-IRIS_25MU_I011B2HO
- Collection: 60MU
- IRAS-IRIS_60MU_I010B3HO
- IRAS-IRIS_60MU_I002B3HO
- IRAS-IRIS_60MU_I011B3HO
- Creator: SERC
 - Collection: I-DSS2
 - SERC_I-DSS2_029
 - Collection: I-PLATE-DSS2
 - SERC_I-PLATE-DSS2_029
 - Collection: J-DSS1
 - SERC_J-DSS1_029
 - Collection: J-LOW-DSS1
 - SERC_J-LOW-DSS1_029
 - Collection: J-MAMA
 - SERC_J-MAMA_029
 - Collection: J-PLATE-DSS1
 - SERC_J-PLATE-DSS1_029
 - SERC_J-PLATE-DSS1_051
 - Collection: J-PLATE-MAMA
 - SERC_J-PLATE-MAMA_029

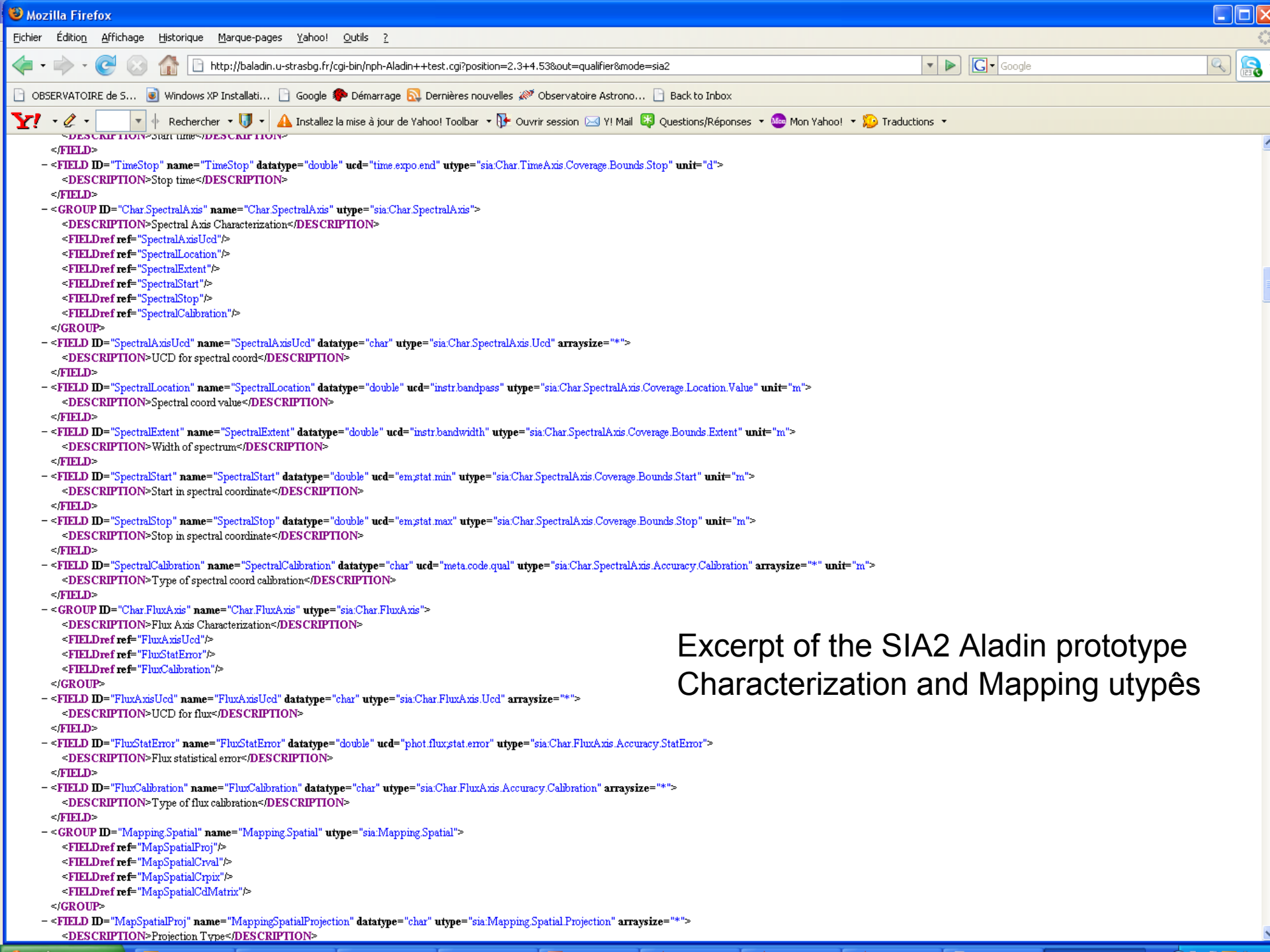
Data Info Frame

Display

UType	
sia:Query.Score	
sia:Association.ID	
sia:Access.Reference	
sia:Access.Format	
sia:Dataset.DataModel	
sia:Dataset.Length	
sia:DataID.Title	
sia:DataID.Creator	
sia:DataID.Collection	
sia:DataID.Collection.Type	
sia:DataID.CreatorDID	
sia:CoordSys.SpaceFrame.Name	
sia:CoordSys.SpaceFrame.Equinox	
sia:CoordSys.TimeFrame.Name	
sia:Char.SpatialAxis.Coverage.Location.Value	
sia:Char.SpatialAxis.Coverage.Bounds.Extent	
sia:Char.SpatialAxis.Accuracy.Calibration	
sia:Char.Spatial.Resolution	
sia:Char.TimeAxis.Coverage.Location.Value	
sia:Char.SpectralAxis.Ucd	
sia:Char.SpectralAxis.Coverage.Location.Value	
sia:Char.SpectralAxis.Coverage.Bounds.Start	
sia:Char.SpectralAxis.Coverage.Bounds.Stop	
sia:Char.SpectralAxis.Accuracy.Calibration	
sia:Mapping.Spatial.Projection	
sia:Mapping.Spatial.crval	
sia:Mapping.Spatial.crpix	
sia:Mapping.Spatial.cdMatrix	

atlas
ivo://cds/SERC/J-MAMA#1234567896
FK5
2000.0y
TT
01:07:22.82-74:44:00.1
5.0°
Calibrated
1.0"
42755.6d
em;wl
0.468m
0.395m
0.54m
UNCALIBRATEDm
TAN
16896.000000 16896.000000
16.845087 -74.733361
0.000186 0.000000 0.000000 0.000186

image , slot in metadata tree, QR metadata
For NGC 456



```
<FIELD>
- <FIELD ID="TimeStop" name="TimeStop" datatype="double" ucd="time.expo.end" utype="sia.Char.TimeAxis.Coverage.Bounds.Stop" unit="d">
  <DESCRIPTION>Stop time</DESCRIPTION>
</FIELD>
- <GROUP ID="Char.SpectralAxis" name="Char.SpectralAxis" utype="sia.Char.SpectralAxis">
  <DESCRIPTION>Spectral Axis Characterization</DESCRIPTION>
  <FIELDref ref="SpectralAxisUcd"/>
  <FIELDref ref="SpectralLocation"/>
  <FIELDref ref="SpectralExtent"/>
  <FIELDref ref="SpectralStart"/>
  <FIELDref ref="SpectralStop"/>
  <FIELDref ref="SpectralCalibration"/>
</GROUP>
- <FIELD ID="SpectralAxisUcd" name="SpectralAxisUcd" datatype="char" utype="sia.Char.SpectralAxis.Ucd" arraysize="*">
  <DESCRIPTION>UCD for spectral coord</DESCRIPTION>
</FIELD>
- <FIELD ID="SpectralLocation" name="SpectralLocation" datatype="double" ucd="instr.bandpass" utype="sia.Char.SpectralAxis.Coverage.Location.Value" unit="m">
  <DESCRIPTION>Spectral coord value</DESCRIPTION>
</FIELD>
- <FIELD ID="SpectralExtent" name="SpectralExtent" datatype="double" ucd="instr.bandwidth" utype="sia.Char.SpectralAxis.Coverage.Bounds.Extent" unit="m">
  <DESCRIPTION>Width of spectrum</DESCRIPTION>
</FIELD>
- <FIELD ID="SpectralStart" name="SpectralStart" datatype="double" ucd="em.stat.min" utype="sia.Char.SpectralAxis.Coverage.Bounds.Start" unit="m">
  <DESCRIPTION>Start in spectral coordinate</DESCRIPTION>
</FIELD>
- <FIELD ID="SpectralStop" name="SpectralStop" datatype="double" ucd="em.stat.max" utype="sia.Char.SpectralAxis.Coverage.Bounds.Stop" unit="m">
  <DESCRIPTION>Stop in spectral coordinate</DESCRIPTION>
</FIELD>
- <FIELD ID="SpectralCalibration" name="SpectralCalibration" datatype="char" ucd="meta.code.qual" utype="sia.Char.SpectralAxis.Accuracy.Calibration" arraysize="*" unit="m">
  <DESCRIPTION>Type of spectral coord calibration</DESCRIPTION>
</FIELD>
- <GROUP ID="Char.FluxAxis" name="Char.FluxAxis" utype="sia.Char.FluxAxis">
  <DESCRIPTION>Flux Axis Characterization</DESCRIPTION>
  <FIELDref ref="FluxAxisUcd"/>
  <FIELDref ref="FluxStatError"/>
  <FIELDref ref="FluxCalibration"/>
</GROUP>
- <FIELD ID="FluxAxisUcd" name="FluxAxisUcd" datatype="char" utype="sia.Char.FluxAxis.Ucd" arraysize="*">
  <DESCRIPTION>UCD for flux</DESCRIPTION>
</FIELD>
- <FIELD ID="FluxStatError" name="FluxStatError" datatype="double" ucd="phot.flux.stat.error" utype="sia.Char.FluxAxis.Accuracy.StatError">
  <DESCRIPTION>Flux statistical error</DESCRIPTION>
</FIELD>
- <FIELD ID="FluxCalibration" name="FluxCalibration" datatype="char" utype="sia.Char.FluxAxis.Accuracy.Calibration" arraysize="*">
  <DESCRIPTION>Type of flux calibration</DESCRIPTION>
</FIELD>
- <GROUP ID="Mapping.Spatial" name="Mapping.Spatial" utype="sia.Mapping.Spatial">
  <FIELDref ref="MapSpatialProj"/>
  <FIELDref ref="MapSpatialCrval"/>
  <FIELDref ref="MapSpatialCrpix"/>
  <FIELDref ref="MapSpatialCdMatrix"/>
</GROUP>
- <FIELD ID="MapSpatialProj" name="MappingSpatialProjection" datatype="char" utype="sia.Mapping.Spatial.Projection" arraysize="*">
  <DESCRIPTION>Projection Type</DESCRIPTION>
```

Excerpt of the SIA2 Aladin prototype
Characterization and Mapping utypês