

NRC-CNRC

*Herzberg Institute
of Astrophysics*

Science
at work for
Canada



National Research
Council Canada

Conseil national
de recherches Canada

Canada 

Cube Access prototype

- **Data Discovery via TAP + ObsCore or SIA-2.0 query**
 - returns ObsCore metadata
 - query response contains metadata to call DataLink service
- **DataLink service to find download URLs and service(s)**
 - supports multiple files per dataset
 - returns links/description of prototype access data capability
 - TODO: semantic markup for links
- **AccessData prototype not yet updated :-)**
 - accepts STC AstroCoordArea instead of simple WD params

DataLink in SIA query response

```
<FIELD name="obs_publisher_did" datatype="char" ID="caomPlaneURI" ...
```

```
<RESOURCE type="meta" utype="ad hoc:service">  
  <PARAM name="resourceIdentifier" datatype="char" arraysize="*" value="ivo://cad.c.nrc.ca/datalink" />  
  <PARAM name="standardID" datatype="char" arraysize="*" value="ivo://ivoa.net/std/DataLink#links-1.0" />  
  <PARAM name="accessURL" datatype="char" arraysize="61"  
    value="http://www.cadc-ccda.hia-ih.a.nrc-cnrc.gc.ca/caom2ops/datalink" />  
  <GROUP name="inputParams">  
    <PARAM name="REQUEST" datatype="char" arraysize="*" value="">  
      <VALUES>  
        <OPTION value="getLinks" />   <OPTION value="getDownloadLinks" />  
      </VALUES>  
    </PARAM>  
  
    <PARAM name="ID" datatype="char" ref="caomPlaneURI" arraysize="*" value="" />  
    <PARAM name="RESPONSEFORMAT" datatype="char" arraysize="*" value="application/x-votable+xml;content=datalink">  
      <VALUES>  
        <OPTION value="application/x-votable+xml" />  
        <OPTION value="application/x-download-manifest+txt" />  
      </VALUES>  
    </PARAM>  
  </GROUP>  
</RESOURCE>  
</VOTABLE>
```

AccessData in DataLink response

```
<FIELD name="file_uri" datatype="char" ID="fileURIRef" ...
```

```
<RESOURCE type="meta" ID="cutout">  
  <PARAM name="resourceIdentifier" datatype="char" arraysize="*" value="ivo://cadc.nrc.ca/cutout" />  
  <PARAM name="accessURL" datatype="char" arraysize="*" value="http://www.cadc-ccda.hia-ihp.nrc-cnrc.gc.ca/caom2ops/cutout" />  
  <GROUP name="inputParams">  
    <PARAM name="uri" datatype="char" ref="fileURIRef" arraysize="*" value="" />  
    <PARAM name="cutout" datatype="char" xtype="stc:AstroCoordArea" arraysize="*" value="" />  
  </GROUP>  
</RESOURCE>  
</VOTABLE>
```

- **implemented a simple library (cadcSIA) in the OpenCADC project**
 - parse all query params into usable objects
 - for those with ObsCore: generate ADQL query
 - for those using cadcUWS library: JobRunner implementation that connects all the parts (error handling sketchy)
 - for those with TAP+ObsCore: complete webapp that calls your TAP service (just needs some configuration)
- **unfortunately, not yet pushed to googlecode...**
<grumble>git, non-fast-forward merge</grumble>