

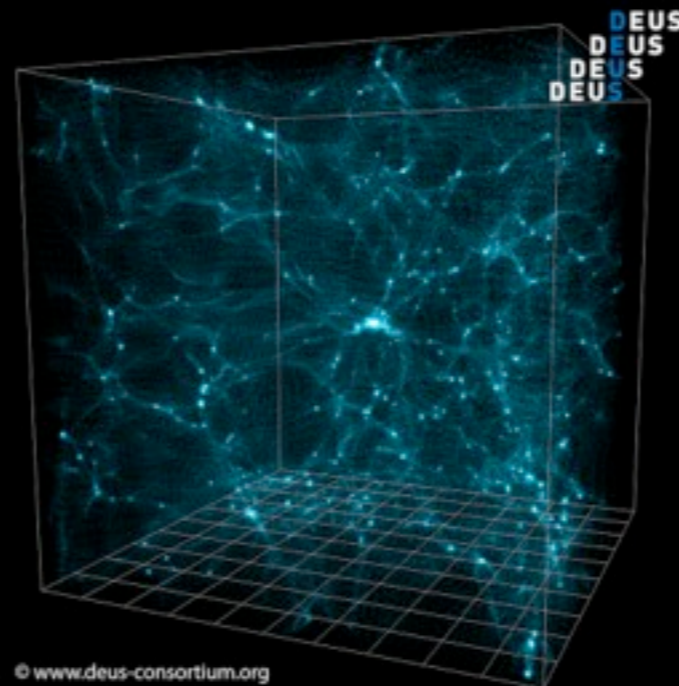
datalink for theory

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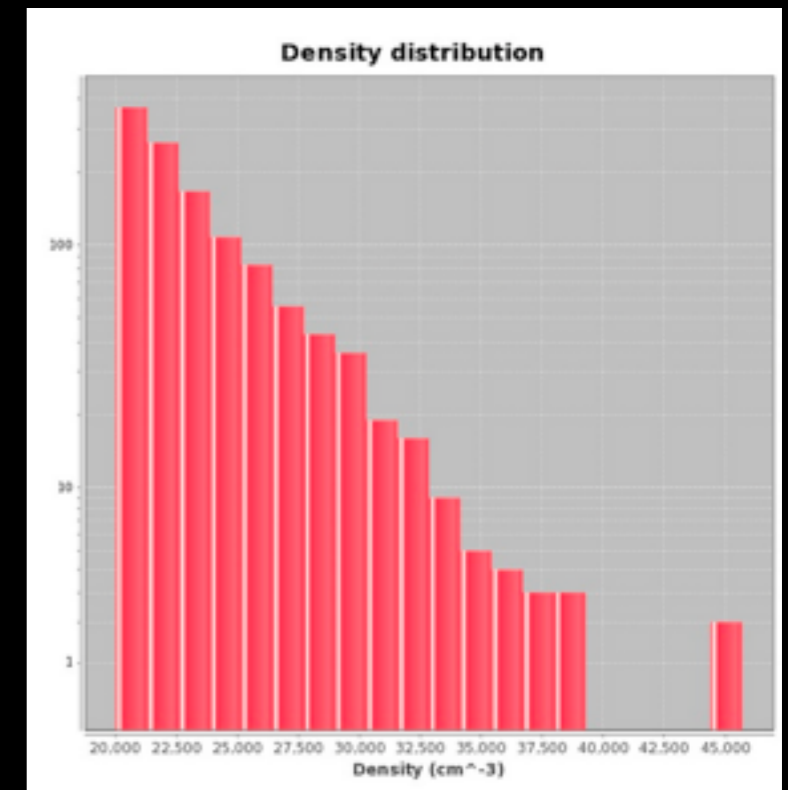
use case

- preview



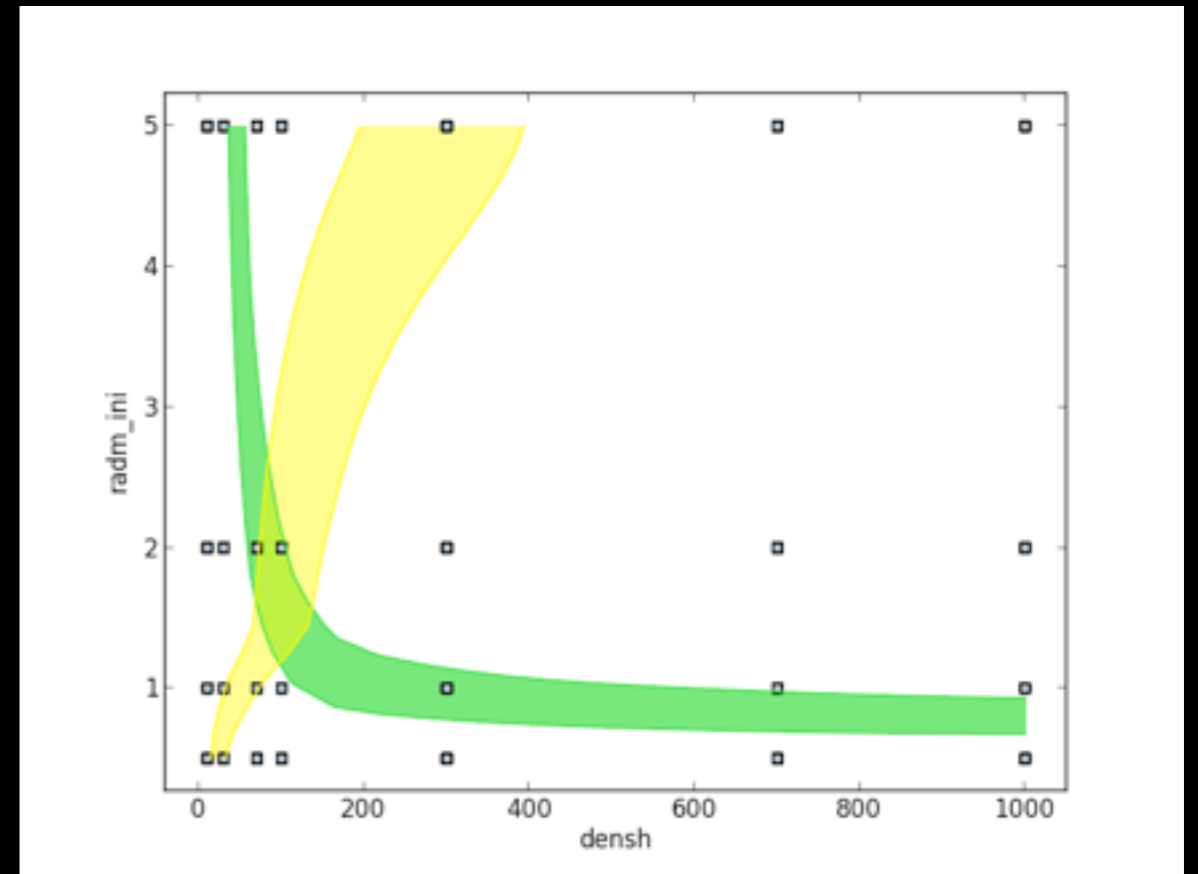
- image (ex: halos in universe cube)

- data distribution (help cutout)



use case

- external service links
- cutout service
- specific, ex: iso-contours for model fitting



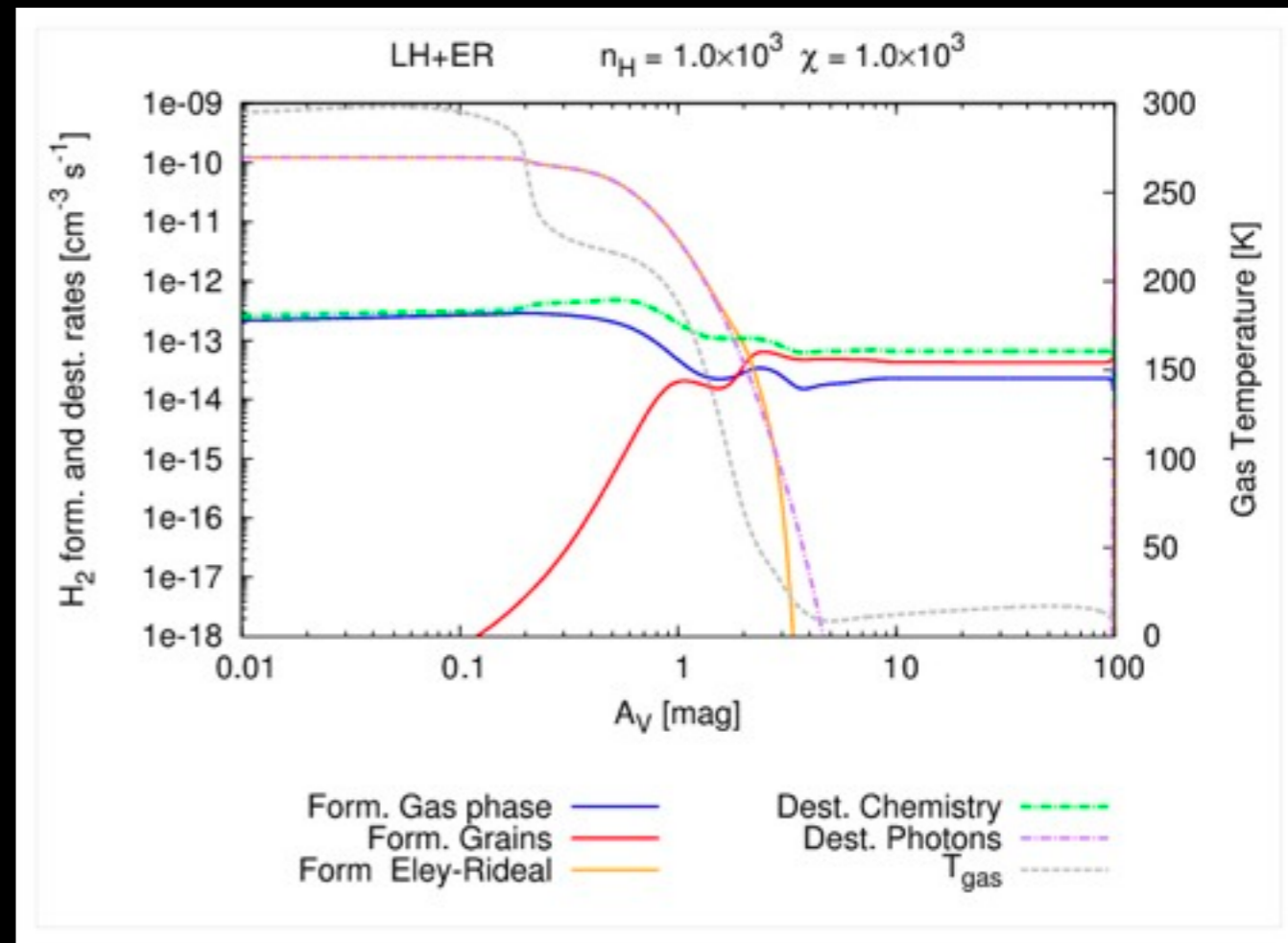
use case

- generic data repository

Index of /simdal-preview/exp

[Name](#) [Last modified](#) [Size](#) [Description](#)

Parent Directory			-
LHER_nle3rle3A1e2_20_1_ab.png	05-Mar-2013 15:35	32K	
LHER_nle3rle3A1e2_20_2_fdH2.png	05-Mar-2013 15:35	41K	
LHER_nle3rle3A1e2_20_3_heat.png	05-Mar-2013 15:35	38K	
LHER_nle3rle3A1e2_20_4_cool.png	05-Mar-2013 15:35	41K	



output

field	description	required ?
uri	identifier of the dataset	y
accessUrl	url returning the linked data	y
semantics	standard meta about the linked material	y
contentType	mime-type	n
description	..	n
contentLength	predicted content length of the linked data	n (dynamic data)

semantics

- TBD
 - <ivo://ivoa.net/std/DataLink/v1.0#DOWNLOAD>
 - <ivo://ivoa.net/std/DataLink/v1.0#PREVIEW>
 -

input

field	description	Required ?
URI	identifier of the dataset origin of link	y

```

▼<votable xmlns="http://www.ivoa.net/xml/VOTable/v1.2" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="1.2">
  ▼<resource>
    ▼<table>
      <field ucd="meta.id" utype="datalink:Datalink.uri" name="uri" arraysize="*" datatype="char" xtype="w3c:URI"/>
      <field utype="datalink:Datalink.accessURL" name="accessURL" arraysize="*" datatype="char" xtype="w3c:URL"/>
      <field utype="datalink:Datalink.semantics" name="semantics" arraysize="*" datatype="char" xtype="w3c:URI"/>
      <field ucd="meta.id" utype="simdal:Artefact.productType" name="productType" arraysize="*" datatype="char"/>
      <field ucd="meta.id" utype="simdal:Artefact.contentType" name="contentType" arraysize="*" datatype="char"/>
      <field ucd="meta.id" utype="simdal:Artefact.contentLength" name="contentLength" arraysize="*" datatype="char"/>
    ▼<data>
      ▼<tabledata>
        ▼<tr>
          ▼<td>
            http://votheory.obspm.fr/simdal/datalink/cutout?uri=experiments&cutout=pubid=tdiff_nlelrlrlzlelal_20_20121223101817
          </td>
          ▼<td>
            http://votheory.obspm.fr/simdal/api/obspm/preview/hdf5?uri=http://votheory.obspm.fr/simdal/datalink/cutout?
            uri=experiments&cutout=pubid=tdiff_nlelrlrlzlelal_20_20121223101817
          </td>
          <td>ivo://ivoa.net/std/DataLink/v1.0#DOWNLOAD</td>
          <td>science</td>
          <td>application/hdf5</td>
          <td/>
        </tr>
        ▼<tr>
          ▼<td>
            http://votheory.obspm.fr/simdal/datalink/cutout?uri=experiments&cutout=pubid=tdiff_nlelrlrlzlelal_20_20121223101817
          </td>
          ▼<td>
            http://votheory.obspm.fr/simdal/api/obspm/preview/exp?uri=http://votheory.obspm.fr/simdal/datalink/cutout?
            uri=experiments&cutout=pubid=tdiff_nlelrlrlzlelal_20_20121223101817
          </td>
          <td>ivo://ivoa.net/std/DataLink/v1.0#PREVIEW</td>
          <td>science</td>
          <td>image/png</td>
          <td/>
        </tr>
      </tabledata>
    </data>
  </table>
</resource>
</votable>

```


URI over dataset_id

composable services

cutout

- cutout interface (java like)
 - extend cutout to any set (ex metadata)
- cutout contract
 - composable function !
 - (cutout set) \rightarrow set

URI for any (data)set

- (cutout dataset) -> dataset
- (cutout (cutout dataset)) -> dataset
-

- (datalink dataset)
- (datalink (cutout dataset))

URI over dataset_id

- predefined dataset (dataset_id)
- but also **dynamically generated datasets** (ex: from previous cutout).

URI=[http://my.server/datalink/cutout?
uri=experiments&cutout='mass<10e3'](http://my.server/datalink/cutout?uri=experiments&cutout='mass<10e3')

case study, model fitting

ntot(h) < 7.4415e20 and ntot(co) > 0.4e14 and ntot(oh) > 1.01e15

SimDAL search query

matching objects

protocol:[pdr_1_5_2_rev814]
experiment: [tdiff_n1e1r5m1r5m1z1e1a1p3_20_2012122310218](#)

protocol:[pdr_1_5_2_rev814]
experiment: [tdiff_n1e1r5m1r5m1z1e1a1p5_20_20121223102144](#)

protocol:[pdr_1_5_2_rev814]
experiment: [tdiff_n1e1r5m1r5m1z1e1a1p7_20_20121223102218](#)

matching objects

protocol:[pdr_1_5_2_rev814]
experiment: [tdiff_n1e1r1r1z1e1a1p7_20_20121223101743](#)
cumulated error: 11.07 %

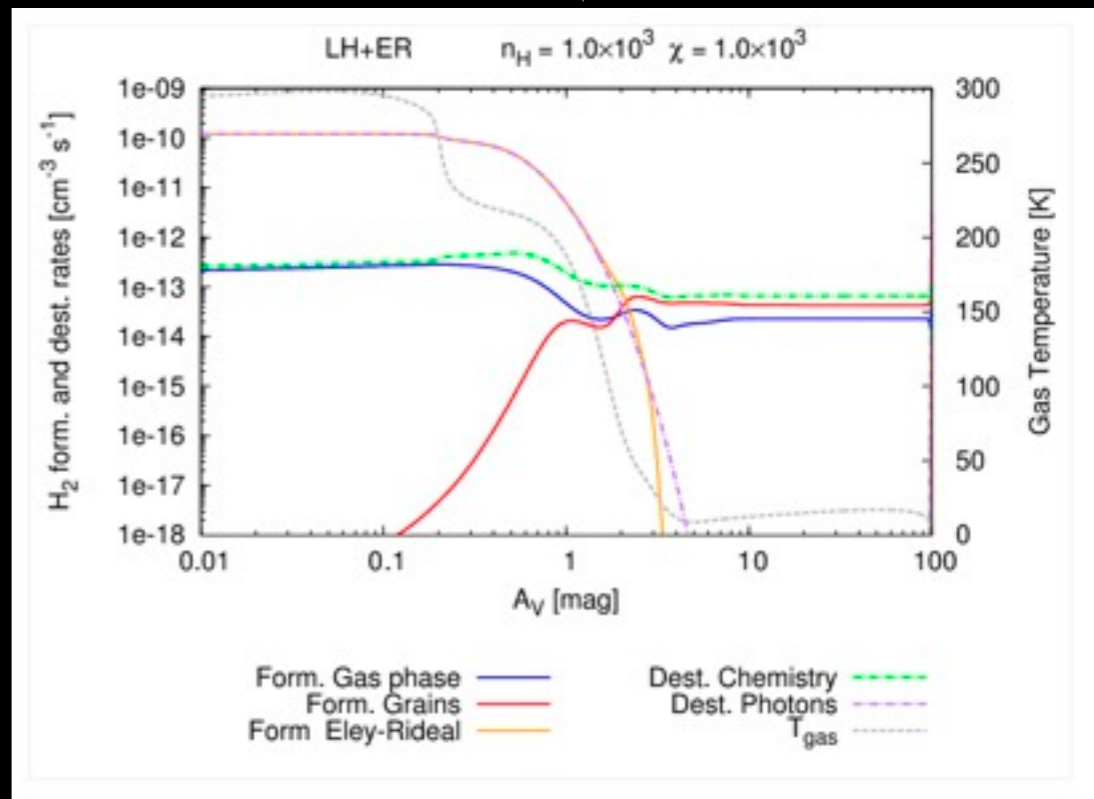
cd_tot_h **-11.07**
cd_tot_co
cd_tot_oh

```

<tr>
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  </td>
  <td>
    http://localhost:3000/api/obspm/preview/exp?uri=http://localhost:3000/datalink/cutout?uri=experiments&cutout=pubid=tdiff_n1e1r5m1r5m1z1e1a1p3_20_2012122310218
  </td>
  <td>ivo://ivoa.net/std/DataLink/v1.0#PREVIEW</td>
  <td>science</td>
  <td>image/png</td>
</tr>
</tr>
  
```

datalink

accessURL



summary

- Use case
 - **preview** (pictures)
 - data repository (raw data)
 - external services (**postprocessing**)
- Specific needs
 - mime-type (hdf5, jpeg etc...)
 - content-length (not always known/calculated)

summary

- we need composable services
 - cutout in particular
- would be nice
 - generalized cutout interface