CENTRE DE DONNÉES
ASTRONOMIQUES DE STRASBOURG

CDS HATs records in registry

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HATS in Registry

Including HATS in Registry

Note: https://www.ivoa.net/documents/Notes/HATS/ (M. DeLucchi et al.)

HATS (Hierarchical Adaptive Tiling Scheme) is a format not a service.

Hierarchical Directory Structure sharded (moc) into parquet files of approximately the same size.

https://github.com/ivoa/registry-housekeeping/issues/12

```
catalog/
|-- [REQUIRED] properties
|-- [RECOMMENDED] partition_info.csv
|-- [OPTIONAL] point_map.fits
|-- [OPTIONAL] data_thumbnail.parquet
+-- dataset/
    |-- [RECOMMENDED] _metadata
    |-- [RECOMMENDED] _common_metadata
    |-- Norder=0/
    |-- Norder=1/
    |-- Norder=2/
    |-- Norder=3/
    |-- Norder=4/
    |-- Norder=5/
    |-- Norder=6/
    +-- Norder=. . ./
```

Selected Metadata :

- HATS URL → vr:capability
- Table description (name, units, stats) → VOSI table
- Estimation size / number of records (=hats_nrows) → vs:nrows (in vs:Table)
- Manage n,m relations between capabilities and tables
  table provided by multiple HATS
  managing resource having several tables, possibly several HATS
- Manage relations from/to original HATS repository → vr:relationShips
  idea: select the appropriate host (availability, speed networks…?)

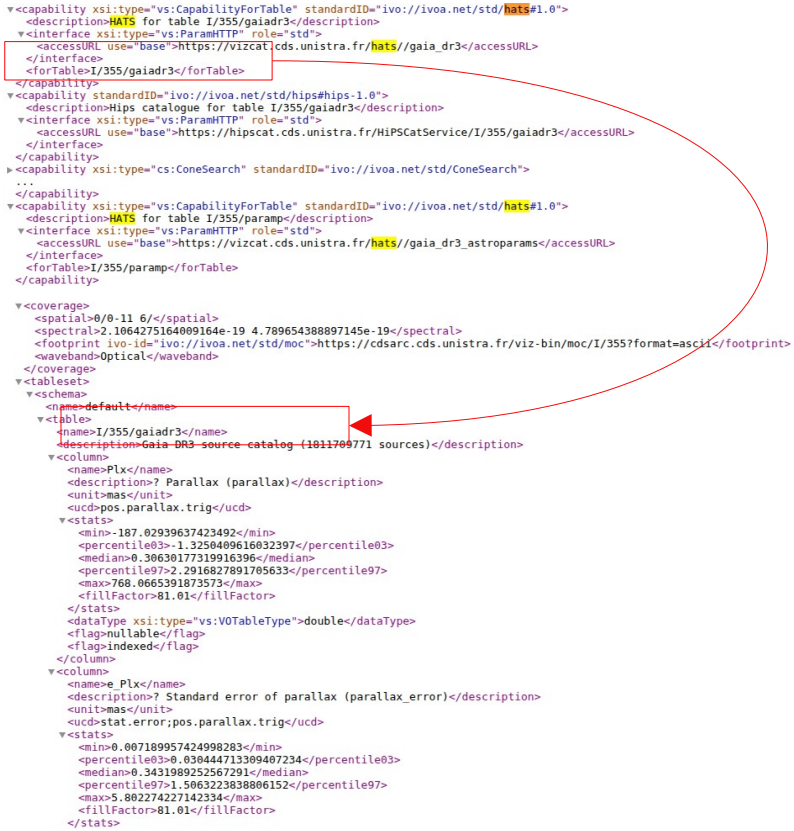
No Registry extension needed



HATS in registry

Providing VOSI tables for HATS dataset

Each vr:Table is possibly served by multiple service: eg: VizierR Gaia table ivo://CDS.VizieR/I/355 (SCS, TAP, HATS, HiPS)





HATS in registry

What next?

- provide HATS for each large Vizier table
  - Adding vr:relationShips (when known) to original HATS

```
<relationship>
   <relationshipType>Cites</relationshipType>
   <relatedResource altIdentifier="ivo://...">ORIGINAL HATS repository</relatedResource>
</relationship>
```

- Use the same mechanism for **HiPS** catalogue
- Providing MOC for HATS
  declare new MOC capability? (one for each table)
  add MOC in HATS (as HiPS) ?