DOI into VizieR

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Identifiers in VizieR

Identifiers provided by VizieR

- The catalogue name :
  example : I/345 (Gaia DR2)
  J/A+A/414/699 (catalogue A&A)
- The bibcode : shared with ADS
  2018A&A...616A...1G (Gaia DR2)
  2004A&A...414..699C (catalogue A&A)
- The ivoID (VO-registry)
  ivo://cds.vizier/i/345 (Gaia DR2)
  ivo://cds.vizier/j/a+a/414/699 (catalogue A&A)

External identifiers (available in VizieR)

(added recently in VizieR metadata and updated from ADS database)

- Article DOI
- First author Orcid

To generate DOI

- DOI registration organisation : Datacite
  https://www.datacite.org/

  Only members can create DOI (in France, INIST (CNRS))

  INIST: Institut de l'Information Scientifique et Technique
  http://www.inist.fr/?Attribution-de-DOI&lang=fr

- Recommendation given by INIST (CNRS):
  - Define the type, workflows of the DOI targeted
  - Verify the relevance of the cited object
    (granularity level? does the object merit to be cited?)
  - Data & metadata quality:
    → list the metadata and verify if they are compliant with the ethics

To generate DOI

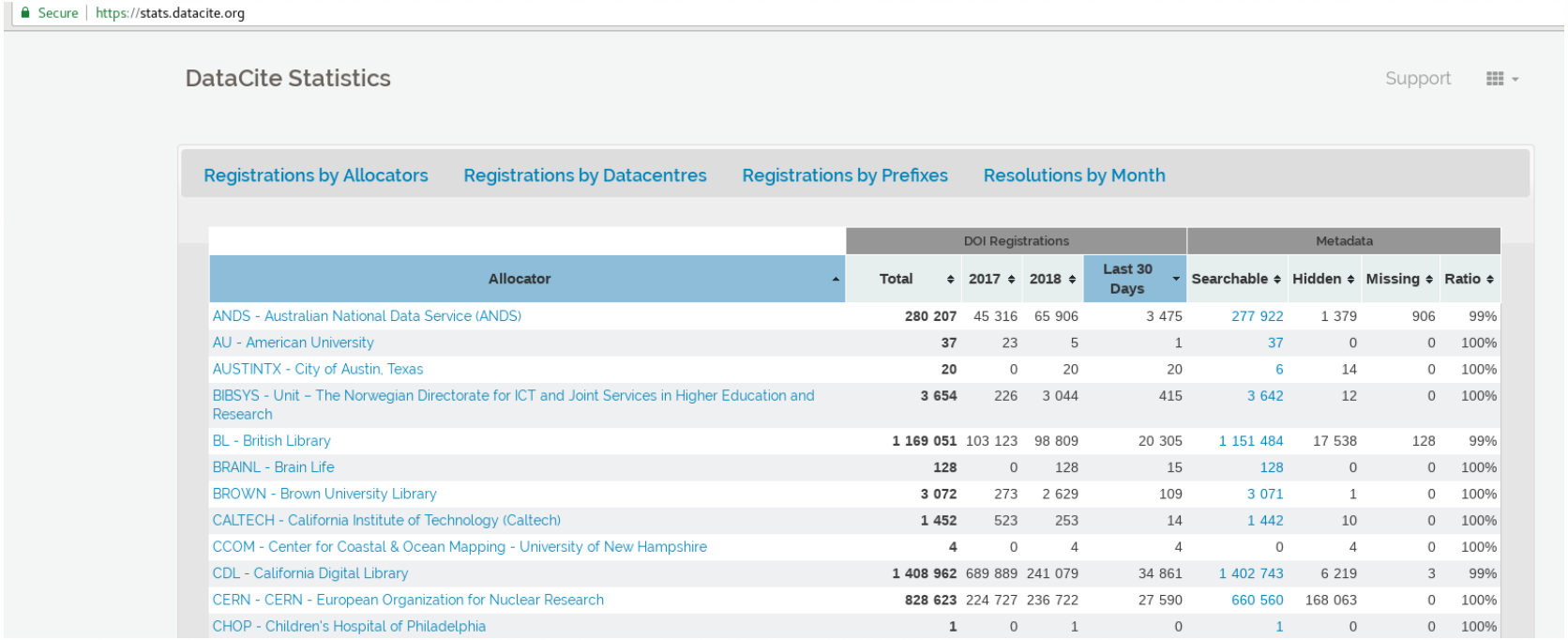
Some requirements

- Stable URL
- Long-term preservation
- Access to the objects through the "landing pages"
- *(INIST) Meta-data must be available and subject to a CC0 licence*
  => no restrictions on reuse of the metadata

Why a VizieR DOI ?

To take advantage of DOI

- DOI is a standard : it is commonly used by authors to cite data in article
- Search engine (datacite: https://www.datacite.org/)
- The URL redirection mechanism to a “landing page”
- DataCite provides statistics : https://stats.datacite.org/#tab-resolution-report



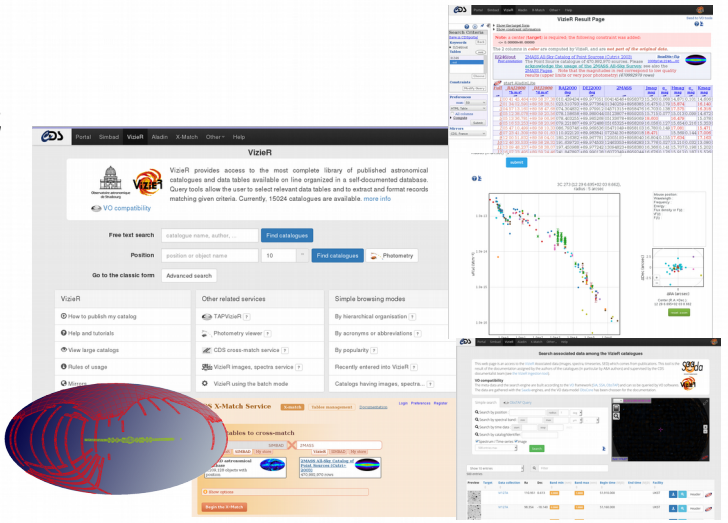
	DOI Registrations				Metadata			
Allocator	Total	2017	2018	Last 30 Days	Searchable	Hidden	Missing	Ratio
ANDS - Australian National Data Service (ANDS)	**280 207**	45 316	65 906	3 475	277 922	1 379	906	99%
AU - American University	**37**	23	5	1	37	0	0	100%
AUSTINTX - City of Austin, Texas	**20**	0	20	20	6	14	0	100%
BIBSYS - Unit – The Norwegian Directorate for ICT and Joint Services in Higher Education and Research	**3 654**	226	3 044	415	3 642	12	0	100%
BL - British Library	**1 169 051**	103 123	98 809	20 305	1 151 484	17 538	128	99%
BRAINL - Brain Life	**128**	0	128	15	128	0	0	100%
BROWN - Brown University Library	**3 072**	273	2 629	109	3 071	1	0	100%
CALTECH - California Institute of Technology (Caltech)	**1 452**	523	253	14	1 442	10	0	100%
CCOM - Center for Coastal & Ocean Mapping - University of New Hampshire	**4**	0	4	4	0	4	0	100%
CDL - California Digital Library	**1 408 962**	689 889	241 079	34 861	1 402 743	6 219	3	99%
CERN - CERN - European Organization for Nuclear Research	**828 623**	224 727	236 722	27 590	660 560	168 063	0	100%
CHOP - Children's Hospital of Philadelphia	**1**	0	1	0	1	0	0	100%

What is a VizieR DOI ?

What is VizieR DOI ?

Granularity : the catalogue (!= table in the IVOID registry)

- table can be subject to transformation even after publication (example : fusion)
- Include the whole catalogue :
  - The data : tables, associated data (FITS, spectra, images)
  - The metadata (ReadMe) : coordinates, filters, time, ...
  - Added values : links, plots....
  - The services to access the data :
    - VO : SCS, TAP, SIA, SSA, ObsTAP, MOC
    - FTP
    - Dedicated web application



DOI metadata

A join effort with the VizieR team - documentalists + engineer

- The VizieR DOI syntax :
  DataCite encourages DOI publishers to use a sufficiently opaque suffix
  - example : XXXX/CDS/xxxxx

    Prefix (fixed by DataCite)

    Suffix (specific to each object and fixed by VizieR)
  - DOI is persistent
    => Opaque suffix is preferable to avoid information in the identifier

    e.g. : catalogue removed after being published in VizieR

- DOI based on VizieR catalogue name : XXXX/CDS/VizieR/J/A+A/1246
- Semi-opaque DOI : XXXX/CDS/34140699
- Opaque DOI : XXXX/34140699

- Define DOI metadata AND metadata in the landing page
  → Priviledge meta-data in the landing-page rather than DOI metadata
  - more flexible !
  - What are the benefits to put all metadata in DOI ?
    (example : abstract, ..)

DOI metadata

- Datacite provides the MDS service (Metadata Store) to register DOI associated with metadata.
- DOI Metadata are gathered into a XML document :
  http://schema.datacite.org/meta/kernel-4/doc/DataCite-MetadataKernel_v4.0.pdf

Metadata subject to a particular attention in the VizieR context

- Remove abstract from DOI-metadata because abstract could be subject to licences CC ZERO
- Related identifiers :
  - Alternative identifiers : **bibcode**, **IVOID**
  - Link external identifiers with the relationship type:
    - **DOI** : the Datacite XML schema provides a rich grammar :
      IsCitedBy, IsSupplementTo, IsSupplementedBy, IsContinuedBy, IsPartOf, HasPart, IsReferencedBy, …

      → Use «*IsSupplementTo*» relation to link VizieR catalogues with published articles

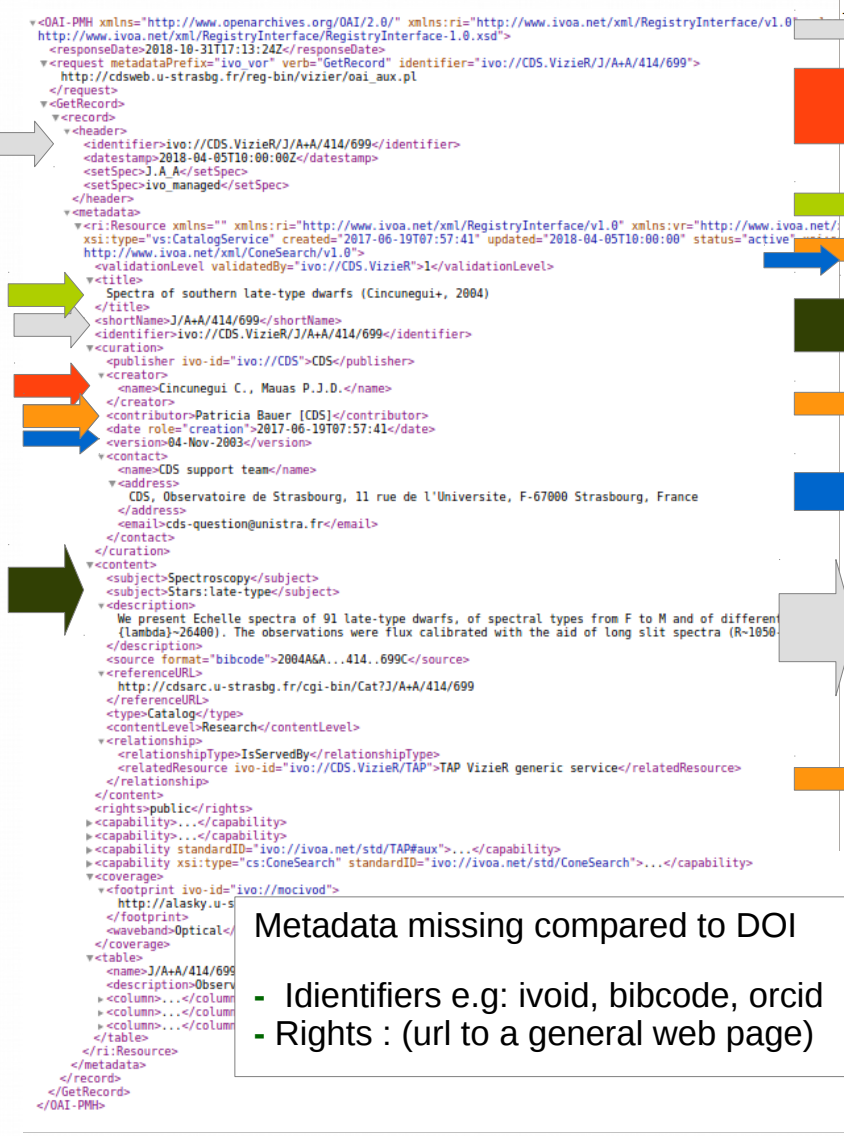
```
<relatedIdentifier relatedIdentifierType="DOI" relationType="IsSupplementTo">
        10.1051/0004-6361:20031671
</relatedIdentifier>
```

    - **Orcid** of the first author enables link (URL resolution similar than DOI)

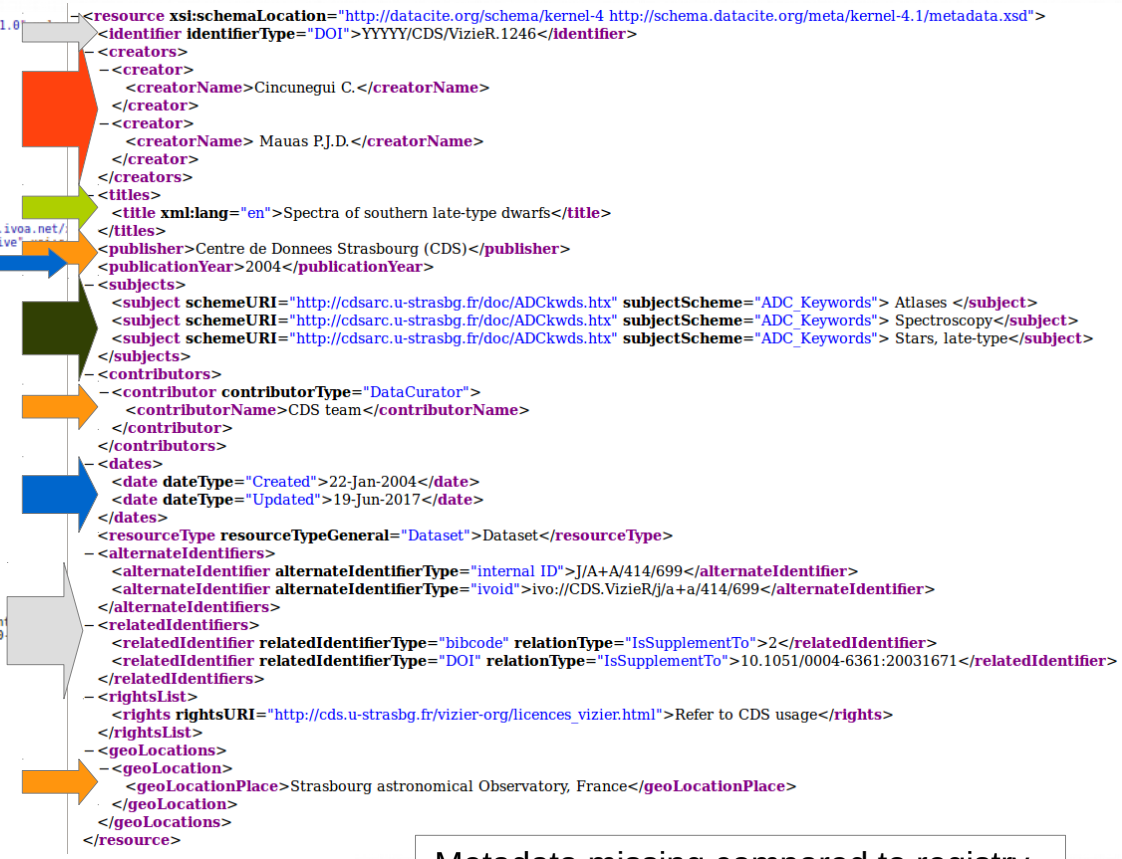
→ populate DOI & Orcid in VizieR from **ADS**

Comparison with registry

IVOA registry



DOI metadata



Metadata missing compared to DOI

- Idientifiers e.g: ivoid, bibcode, orcid
- Rights : (url to a general web page)

Metadata missing compared to registry

- Limitted content description:
→ tables and columns
- Links : the landing page is given with metadata (but outside the XML)

Landing page

Portal Simbad VizieR Aladin X-Match Other Help

Spectra of southern late-type dwarfs : J/A+A/414/699

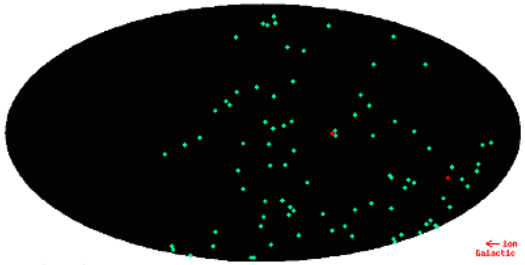
Access to: VizieR | FTP | ReadMe | TAP | Xmatch | Fits

Authors : Cincunegui C. , Mauas P.J.D.

Bibcode : 2004A&A...414..699C (ADS)
2004A&A...414..699C (Simbad)
Simbad objects

CDS Keywords : Atlases ; Spectroscopy; Stars, late-type

Observation (OC)



Inserted into VizieR : 22-Jan-2004
Last modification : 19-Jun-2017

Article Origin | Acknowledgment | ReadMe | FTP | VizieR

Library of flux-calibrated echelle spectra of southern late-type dwarfs with different activity levels.

Article DOI : 10.1051/0004-6361:20031671
Keywords : atlases - stars: late-type

Abstract: We present Echelle spectra of 91 late-type dwarfs, of spectral types from F to M and of different levels of chromospheric activity, obtained with the 2.15-m telescope of the CASLEO Observatory located in the Argentinean Andes. Our observations range from 3890 to 6690Å, at a spectral resolution from 0.141 to 0.249Å per pixel (R=λ/δλ~26400). The observations were flux calibrated with the aid of long slit spectra (R~1050-2070), also available.

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Contact

http://cdsarc.u-strasbg.fr/viz-bin/cat/J/A+A/414/699

Landing page

Portal Simbad VizieR Aladin X-Match Other Help

Gaia DR2 : I/345

Access to VizieR FTP ReadMe TAP Xmatch

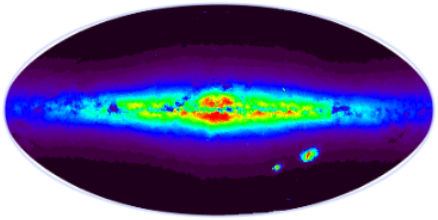
Authors : Gaia collaboration

Bibcode : 2018A&A...616A...1G (ADS)
2018A&A...616A...1G (Simbad)
Simbad objects

CDS Keywords : Surveys ; Stars, standard ; Positional data ; Proper motions ; Photometry, photographic ; Cross identifications ; Radial velocities ; Stars, variable ; Minor planets; Parallaxes, trigonometric

Observation (OC)

Records : 1692919135 sources



Inserted into VizieR : 16-Mar-2018
Last modification : 19-Oct-2018

Article Origin | Description | Acknowledgment | See also | ReadMe | FTP | VizieR

Gaia data release 2 (Gaia DR2).

Article DOI : 10.1051/0004-6361/201833051
Keywords : catalogs - astrometry - techniques: radial velocities - stars: fundamental parameters - stars: variables: general - minor planets, asteroids: general

Abstract: Gaia Data Release 2. Summary of the contents and survey properties: We present the second Gaia data release, Gaia DR2, consisting of astrometry, photometry, radial velocities, and information on as- trophysical parameters and variability, for sources brighter than magnitude 21. In addition epoch astrometry and photometry are provided for a modest sample of minor planets in the solar system. A summary of the contents of Gaia DR2 is presented, accompanied by a discussion on the differences with respect to Gaia DR1 and an overview of the main limitations which are still present in the survey. Recommendations are made on the responsible use of Gaia DR2 results. ...(more)

http://cdsarc.u-strasbg.fr/viz-bin/cat/I/345

Go to the Gaia DR2 portal

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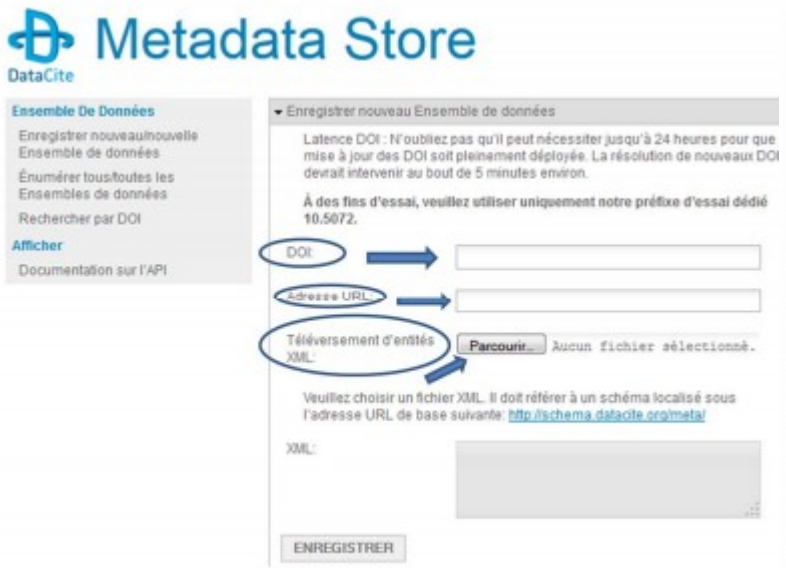
TODO

Finalise the VizieR DOI workflow

- Signature of the contract with INIST (CNRS)
- Include the DOI workflow into the VizieR ingestion workflow
  → DataCite provide a test environment (available for members)
  - A web page (requiring authentification)
  - MDS API : REST API https://mds.datacite.org

    (requires organisations to first register for an account with a DataCite member)
- Generate our first DOI : a DOI for VizieR
- DOI Generation won't be automated in a first step..
- Take into account the sustainability of DOI
  → landing page must be sustainable .
  → create a generic deprecated VizieR page for removed catalogue (after publication)