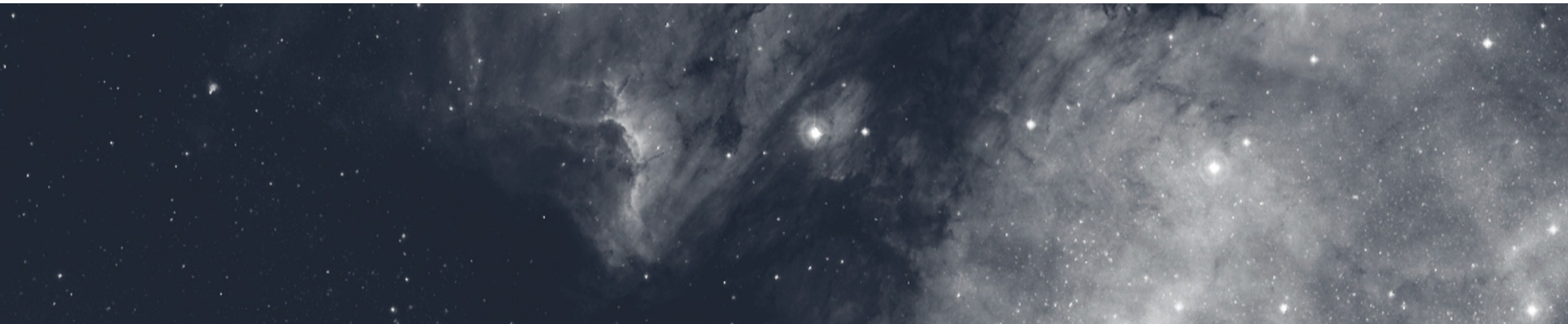


DOI status for VizieR catalogue

G.Landais & the VizieR team
G.Monari, P.Ocvirk, K.Voggel, P.Vannier, E.Perret, L.Trabelsi,
M.Brouty, K. van der Woerd, I.Brossard, N.Barloy



□ Disseminate the datasets

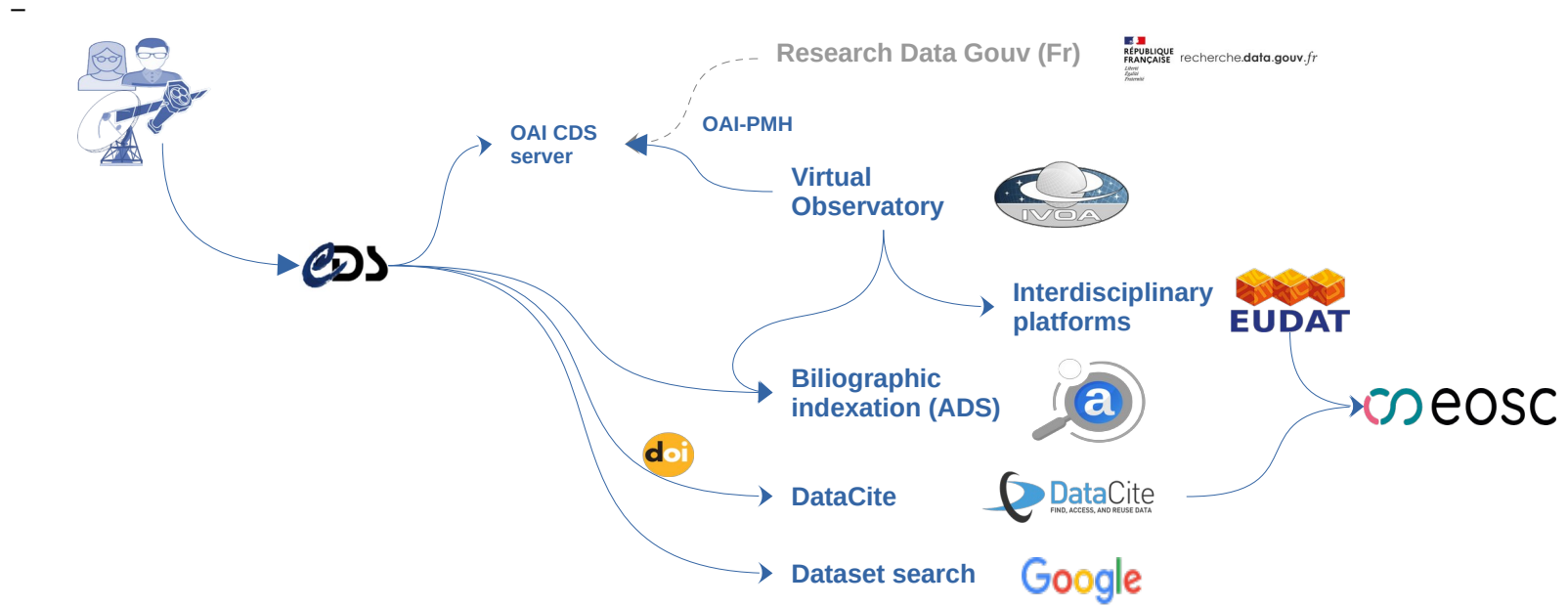
Broadcast authors datasets to a wide audience

Granularity is the Catalogue

ie: collection of files : FITS and tables curated y CDS

- coming from an author article (ie: authors submission)
- coming from space agencies or ground based telescop

Providing metadata using the appropriate schema



□ Dissemination



The same granularity in all networks, but ...

- Same metadata for : authors, DOI, Title, dates, keywords (UAT)
- Specific metadata
 - Linked Data to service (only Registry, B2Find)
 - Linked Data (related identifier) specific (Registry) or not used (EOSC)
 - ORCID (only in DataCite)
 - Specific Descriptions : abstract (Registry/Eudat), specific (DataCite/Eosc)



Status of the DOI workflow

- Automated workflow for every catalogue coming from journals : AAS (AJ, ApJ, ApJS), A&A, MNRAS
~**80% of vizier catalogue have DOI**
- DOIs curated by “hand” for ESA catalogues
eg: Gaia DR3: doi:10.26093/cds/vizieR.1355

IVOA records harvested by science portals



Mass-metallicity relation for giant planets (Kong S. et al., 2018)
<https://cdsarc.cds.unistra.fr/viz-bin/cat/J/ApJ/831/64>



Mass-metallicity relation for giant planets



Exoplanet discoveries of recent years have provided a great deal of new data for studying the bulk compositions of giant planets. Here we identify 47 transiting giant planets ($20 M_{\text{Earth}} < M < 20 M_{\text{J}}$) whose stellar insulations are low enough ($F_* < 2 \times 10^8 \text{ erg s}^{-1} \text{ cm}^{-2}$, or roughly $T_{\text{eff}} 50 M_{\text{Earth}}$) suggest significant amounts of heavy elements in H/He envelopes, rather than cores, such that metal-enriched giant planet atmospheres should be the rule. We also discuss a model of core-accretion planet formation in a one-dimensional disk and show that it agrees well with our derived relation between mass and $Z_{\text{planet}}/Z_{\text{star}}$.

Cone search capability for table J/ApJ/831/64/table1 (Planet data and results)

chemical abundances interdisciplinary a... solar system astronomy solar system planets
stellar astronomy stellar masses

| Identifier | |
|--------------------|---|
| DOI | http://doi.org/10.26093/cds/vizier.18310064 |
| Source | https://dc.gvo.org/rr/q/lp/custom/CDS.VizieR/J/ApJ/831/64 |
| Related Identifier | https://cdsarc.cds.unistra.fr/viz-bin/cat/J/ApJ/831/64 |
| Related Identifier | http://vizier.cds.unistra.fr/viz-bin/VizieR-2?-source=J/ApJ/831/64 |



DATA

DATASET

Year: 2017 | Views: 0 | Downloads: 0 | Citations: 0

Mass-metallicity relation for giant planets

VizieR online Data Catalogue associated with article published in journal *Astronomical Journal* (AAS) with title 'The mass-metallicity relation for giant planets.' (bibcode: 2016ApJ...831...64T)

Author Thorngren, D.P. | Fortney, J.J. | Murray-Clay, R.A. | Lopez, E.D.

Publisher Strasbourg Astronomical Data Center | B2FIND

Identifier [10.26093/cds/vizier.18310064](https://doi.org/10.26093/cds/vizier.18310064) (DOI)

Funding <https://cordis.europa.eu/project/id/313014> (European Commission)

Keywords stellar astronomy • Chemical abundances • Solar system planets • Solar System Astronomy • solar system astronomy • interdisciplinary...

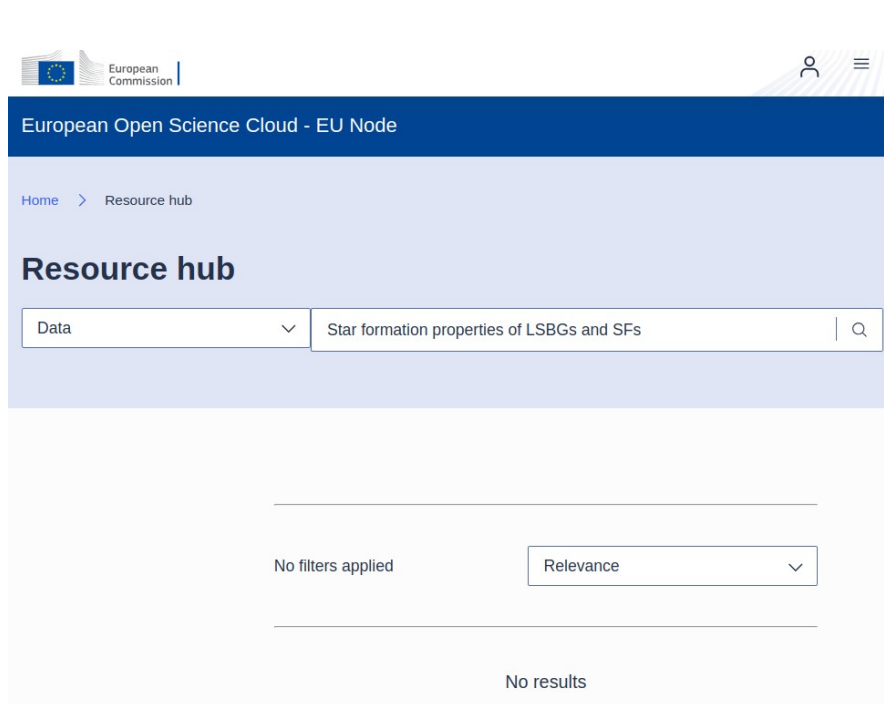
Cite



IVOA records harvested by science portals



Search VizieR dataset (having no DOI)
(<https://cdsarc.cds.unistra.fr/viz-bin/cat/J/PASP/135/J4101>)



“No result” in EOSC portal because no DOI

□ DOI content and linked Data



CDS Proposals based on existing VizieR DOI

- UAT keywords
 - Title and description adapted to the dataset
 - Generic rights (to improve)
 - Linked Data
 - Alternate identifier to link VO
 - Link `IsSupplementTo` to the article
- for dataset coming from space agencies
- Link `IsVariantFormOf` the original dataset
 - Cite `cites` original Data

VizieR online Data Catalogue associated with article published in journal *Astronomical Journal* (AAS) with title 'WIYN open cluster study. VII. NGC 2451A and the Hipparcos distance scale.' (bibcode: 2001AJ....122.1486P)

```
"relatedIdentifiers": [  
  {  
    "relationType": "IsSupplementTo",  
    "relatedIdentifier": "2022yCat.1356....0G",  
    "relatedIdentifierType": "bibcode"  
  },  
  {  
    "relationType": "IsVariantFormOf",  
    "relatedIdentifier": "10.5270/esa-qa4lep3",  
    "relatedIdentifierType": "DOI"  
  },  
  {  
    "relationType": "Cites",  
    "relatedIdentifier": "10.5270/esa-qa4lep3",  
    "relatedIdentifierType": "DOI"  
  }  
]
```

□ DOI for VizieR catalogues



DOI for all vizier catalogue

Motivations:

- Improve citation and discoverability of data for authors, users.
- A unique and standard identifier helping the merge operation executed by harvester (OpenAire, ...?)
- Better interface with harvester which needs a PID
 - Rech Data Gouv using Dataverse
 - EOSC (needs DOI)

The screenshot shows the Dataverse Project website interface. At the top right is the Dataverse Project logo. Below it is the French Republic logo and the text 'RÉPUBLIQUE FRANÇAISE' and 'recherche.data.gov.fr'. The main content area shows search results for 'SDSS surface'. The first result is 'SDSS surface photometry of M31' by Tempel E., Tuvikene T., Tamm A., Tenjes P., 2014. The second result is 'Low surface brightness galaxies in SDSS' by Kniazev A.Y., Grebel E.K., Pustilnik S.A., Pramskij A.G., Kniazeva T.F., Prada F., Harbeck D., 2006. The third result is 'Central surface brightness of 30000 SDSS galaxies' by Fathi K., 2012.

A small, light blue square icon is located in the top left corner of the slide.

20 % VizieR catalogues with no DOI

Question of creating CDS DOI is asked to data producers (editors, space agencies, institutes) who have data in vizier

