

Spectra & images in VizieR



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□ Introduction



- An indexation service dedicated for associated data spectra, images, time-series
 - Dedicated for the associated data published by authors in A&A, AAS, MNRAS and also from surveys
 - Metadatas informed by the authors and the CDS documentalists
- New VO services to access Data (in FITS/VOTable) managed by Saada
 - ObsCore meta-data
 - SIA/SSA and ObsTap access

Data access URL

User interface : <http://cdsarc.u-strasbg.fr/assodata/>

SIA service : [http://cdsarc.u-strasbg.fr/viziersaada/siaservice?collection=\[vizier\]](http://cdsarc.u-strasbg.fr/viziersaada/siaservice?collection=[vizier])

SSA service : [http://cdsarc.u-strasbg.fr/saadavizier/ssaservice?collection=\[vizier\]](http://cdsarc.u-strasbg.fr/saadavizier/ssaservice?collection=[vizier])

ObsTAP service : <http://cdsarc.u-strasbg.fr/saadavizier.tap/tap>



A database generator for images/spectra and tables VO oriented

- Documents (Fits/VOTable) indexation :
provide the mappings with the resources headers
 - In a global table containing all resources
 - In dedicated tables for each VizieR catalogues
- Load test performed successfully
- Customizable metadata
- VO services : SIA, SSA, TAP and registry facilities
- API available to extract Fits/VOTable headers (used in the upcoming upload web interface to help authors to fill metadata)
- Adapted to pipelines which enable meta data in input (ant script for metadata ingestion)

□ Integration progress



Implementation progress

- VO data access : SIA, SSA, ObsTAP
- New services are in the registry

Contents ingestion progress

- Data ingestion began, slowly ;
the new pipeline needs an adaptation period for CDS
- Authors pipeline ingestion in test

Saada updates version 2.26

- Use ObsCore (mandatory) as metadata
- API to map Fits header and ObsCore
- WCS detection Improvement (more projections are detected)
- Ingestion improvements for collections



Metadata choice

- ObsCore DM limited to the mandatory items
- Choice discussed with the AAS editors
- Metadata adding :
 - em_band : Gamma, Xray, EUV, UV, Optical, Millimeter, IR, ...
(a spectral band alternative when the limits are not detected in headers)
 - has_wcs detection flag

Identifiers

- obs_collection: the catalogue name
example: SDSS, CoRoT, J/A+A/378/861
- obs_id: the filename, example: 10144aa.fit
- obs_publisher_did: exemple: ivo://CDS/J/A+A/378/861?res=10144aa.fits

□ The contents



Currently available

- Images : 29 catalogues, ~18,000 images ?
- Spectra/time-series : 23 catalogues, ~84,000 documents

In the pipeline

- Images : ~150 catalogues
- Spectra/time-series : ~150 catalogues

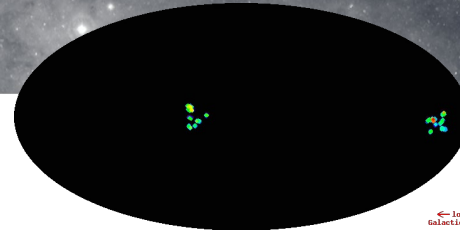
And also 2 surveys

- CoRoT: ~170,000 time-series in Fits format
- Lamost : ~2,400,000 spectra in Fits format

□ The Contents



CoRoT time-series



European space telescope for exoplanet detection (CNES)
<https://corot.cnes.fr/en/COROT>

- Spectral range : 300-950 nm (Optical)
- 2 modes of observations :
 - Bright star mode dedicated to very precise seismology
10 stars in magnitude 6-9 (duration 20-150 days)
 - The faint star mode, observing a very large number of stars , to detect transits (~177,000 targets)
12,000 stars observed in magnitude 12-15.5

Output : ~177,000 observations in FITS formats

VizieR catalogue : <http://vizier.u-strasbg.fr/viz-bin/VizieR?-source=B/corot>

VizieR associated data :

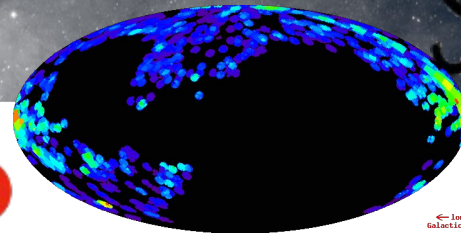
http://csdarc.u-strasbg.fr/assocdata/?obs_collection=B/corot



□ The Contents



Lamost spectra (DR1)



The Large sky Area Multi-Object Fiber Spectroscopic Telescope (LAMOST)
<http://www.lamost.org/public/?locale=en>

Spectral ranges : 370-900nm (Optical)

Observations : 2204696 objects including

- 1,944,329 stars, 12,082 galaxies, 5017 quasars
- 243268 unknown objects.

Output : 2,204,860 spectra

VizieR catalogue : <http://vizier.u-strasbg.fr/viz-bin/VizieR?-source=V/146>

VizieR associated data :

http://cdsarc.u-strasbg.fr/assocdata/?obs_collection=V/146

Lamost SSA service : (China-VO) <http://dr1.lamost.org/voservice/ssap>



Figure 1 LAMOST

Associated data web interface



Search associated data among the VizieR catalogues

This web page is an access to the VizieR A result of the documentation assigned by documentalist team (see the VizieR inges

VO compatibility

The meta-data and the search engine are The data are gathered with the Saada eng

Simple search ObsTAP Query

Request :

```
SELECT TOP 500 [default] FROM obscure
WHERE dataproduct_type = 'image'
AND 1=CONTAINS(POINT('ICRS',s_ra,s_dec),CIRCLE('ICRS',266.416833, -29.007806,1))
```

Simple search

ObsTAP Query

Search by position :

Search by spectral band :

Search by time data : (MJD)

Search by catalog/Identifier:

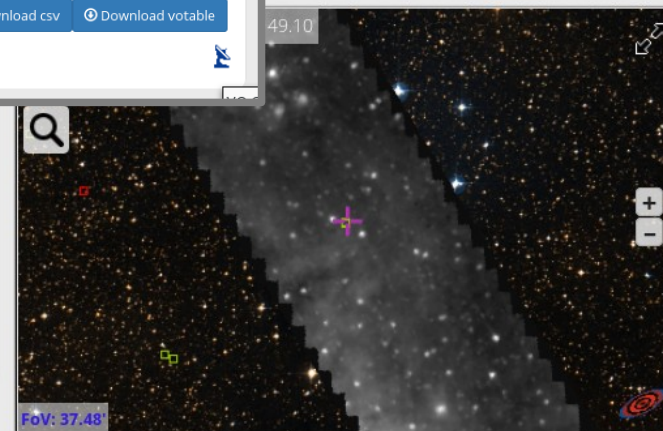
Spectrum / Time series Image

500 entries max

ns. This tool is the by the CDS



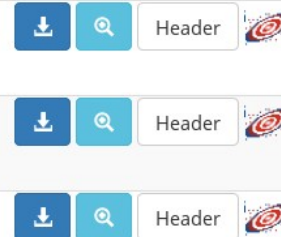
d by VO softwares. on.



Show 10 entries

43 entries

Preview	Target	Data collection	Ra	Dec	Band min (nm)	Band max (nm)	Begin time (MJD)	End time (MJD)	Facility
	CENTERM27M03	II/243	266.278	-29.186	7,000.000	15,000.000	50,350.645		ISO
	CENTERM57M03	II/243	266.098	-29.441	7,000.000	15,000.000	50,350.738		ISO
	CENTER15	II/243	266.051	-28.699	7,000.000	15,000.000	50,174.178		ISO



□ Saada and VizieR



Use VizieR images in Aladin using SIA

The screenshot shows the Aladin v9.0 interface. At the top, the menu bar includes File, Edit, Image, Catalog, Overlay, Coverage, Tool, View, Interop, and Help. The location is set to 18:03:43.09 -20:46:12.7. A toolbar on the right contains icons for select, pan, zoom, dist, phot, draw, tag, filter, crop, epoch, size, cont, zoom, pixel, prop, and del. A panel on the right shows a list of data layers, including VizieR Phot. at z=670μly. The main window displays a multi-wavelength image with a red selection box and a zoomed-in view of a source. The bottom status bar shows 5 sel / 119 src, 45fps / 896Mb.

	dataprod...	c: target n...	obs id	obs coll...	obs publ...	access url	access f...	ai s s s	s region	s t t t t e r	em band	o ucd	pol states	facility...	instr
image	-	1806-203	21cm.fits	J/A+A/53...	ivo://CD...	http://c...	applicat...	1 2 - 0	FoV	7 4!	0 0	obs.image	I	VLA	VLA
image	-	G011.033...	24mu.fits	J/A+A/53...	ivo://CD...	http://c...	applicat...	8 2 - 0	FoV	0		obs.image	NotSet		
image	-	10.25972...	8mu.fits	J/A+A/53...	ivo://CD...	http://c...	applicat...	8 2 - 0	FoV	0		obs.image	NotSet		

ASOV 2016 - spectre/images dans VizieR

The Saada web interface



saadavizier vizier>SPECTRUM>sp_V_146

about

- vizier
 - IMAGE
 - SPECTRUM
 - sp_J_AA_439_11
 - sp_J_AA_572_A
 - sp_J_AA_580_A
 - sp_J_ApJ_755_9
 - sp_J_AA_563_A
 - sp_J_AA_582_A
 - sp_J_AA_570_A
 - sp_J_ApJS_110
 - sp_J_AA_564_A
 - sp_V_127A
 - sp_J_ApJS_122
 - sp_J_AA_512_A
 - sp_J_AA_414_6
 - sp_J_AA_567_A
 - sp_J_AA_545_A
 - sp_III_251
 - sp_J_ApJS_172
 - sp_V_146

Previous Next Show 10 entries Showing 1 to 10 of 100 entries

Access	Position	Name	Energy Range (m)	time range	_z	_class
	22:32:04.92+01:08:32.1 (s)	LAMOST	3.70E-07 - 9.08E-07	19/10/2012 20:17:3 to 21:8:2	2.1281	QSO
	22:25:51.07+01:15:51.5 (s)	LAMOST	3.70E-07 - 9.10E-07	19/10/2012 20:15:2 to 21:2:36	0.8131	QSO
	22:26:44.79+00:50:20.0 (s)	LAMOST	3.70E-07 - 9.10E-07	19/10/2012 20:15:2 to 21:2:36	3.0457	QSO
	22:28:04.03+00:57:39.5 (s)	LAMOST	3.70E-07 - 9.10E-07	19/10/2012 20:15:2 to 21:2:36	2.0860	QSO
	22:30:22.69+01:59:52.3 (s)	LAMOST	3.70E-07 - 9.10E-07	19/10/2012 20:8:17 to 20:59:0	1.2613	QSO
	22:32:35.21+02:47:55.8 (s)	LAMOST	3.70E-07 - 9.06E-07	19/10/2012 20:12:16 to 21:2:21	2.1509	QSO
	22:29:36.31+01:43:11.2 (s)	LAMOST	3.70E-07 - 9.10E-07	19/10/2012 20:17:13 to 21:8:29	0.5028	QSO
	22:34:12.49+00:59:06.2 (s)	LAMOST	3.70E-07 - 9.10E-07	19/10/2012 20:18:56 to 21:14:25	2.1509	QSO
	22:35:23.57+02:24:46.2 (s)	LAMOST	3.70E-07 - 9.08E-07	19/10/2012 20:16:38 to 21:5:5	0.6260	QSO
	22:37:10.96+02:10:51.2 (s)	LAMOST	3.70E-07 - 9.08E-07	19/10/2012 20:16:38 to 21:5:5	3.0822	QSO

Previous Next Show 10 entries Showing 1 to 10 of 100 entries

SUBMIT

Position Const on Keywords UCD based Const Pattern Plain Text Query

Result Limit

100

2/2

Query Mode

Available Keywords

- wat1_001 (String)
- crval1 (double)
- cd1_1 (double)
- crpix1 (int)
- ctype1 (String)
- dc_flag (int)
- class (String)

Active Constraints

_z > 0 -
AND _class = QSO -

cdsarc.u-strasbg.fr/saadavizier/# | le