



# brainstorming

Journées ASOV 2021

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JMMC / OSUG

# Hack@Thon Brainstorming

- data models ? biodiversité au JMMC => unification / liens entre services et données => interop++
- Efficacité des services: cache à tous les niveaux (VO) pour améliorer efficacité (flux http, cache requetes http)
- Evolution vers data center: exploiter postgresql database + TAP (vues / requêtes unifiées)
- Provenance ? pipeline SearchCal: compilation catalogues Vizier + Simbad => cross identification des objets % jsdc 3
- SAMP: wonderful: https support works like a charm !



# Points généraux



# JMMC organization

Pole national JMMC :

- tools and databases = service MOIO
- user support, outreach, schools, surveys = service SUV

New direction late april 2021:

JMMC will be headed by **Isabelle Tallon-Bosc**

and **MOIO** by **Jean-Philippe Berger**.

**SUV** continues to be headed by **Alexis Matter**.

The screenshot shows the JMMC website header with the logo and tagline "We interfere constructively". The navigation menu includes: THE JMMC, TOOLS, USER SUPPORT, PUBLICATIONS, JOBS, TRAINING, NEWS. Below the menu is a banner image of the observatory buildings. A sidebar on the left lists: THE JMMC, Who are we?, Structure (highlighted), MOIO, SUV, Who was JMM?. The main content area shows "Structure" and "Organizational chart".

## Information & news on <http://www.jmmc.fr>

The organizational chart is structured as follows:

- JMMC pole**
  - Scientific Council: Pdl: L. Paulina
  - Director: Gilles Duvert
  - Directors Council: Pdt: DSAA INSU
- Technical Center**
  - Software
  - Coordination & Infrastructure: G. Mella (OSUG)
  - Technical Director: L. Bourges (OSUG)
  - Web services
- R & D Groups**
  - Grenoble OSUG
  - Lyon OSUL
  - Nice OCA
  - Obs. Paris
  - SNO5 MOIO\* (Director: G. Duvert (IPAG/OSUG))
    - Existing tools maintenance and support: G. Duvert, M. Benisty (IPAG/OSUG)
    - Model fitting and Image Reconstruction: F. Soulez (CRAL/OSUL)
    - OI Data Bases: OIDB, JSDC, JMDC, BadCal... X. Haubois (ESO)
    - AMHRA\*\*: A. Domiciano de Souza (LAGRANGE/OCA)
- SUV local representatives:**
  - SNO3 SUV\*\* (Director: A. Matter (LAGRANGE/OCA))
    - OCA: A. Matter
    - Obs.Paris: V. Coudé du Foresto
    - OSUG: J.-C. Augereau
    - OSUL: E. Thiébaud
  - Training: A. Meillard (OCA)

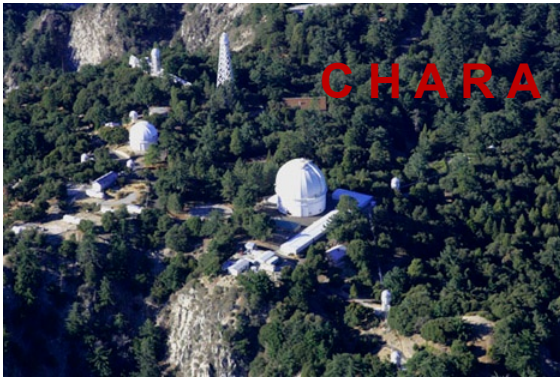
(\*) Méthodes et Outils pour l'Interférométrie Optique (\*\*) Support Utilisateur VLTI (\*\*\*) Analyse et Modélisation en Haute Résolution Angulaire [v.2019-06-15]



# Service overview



VLTI



CHARA

+ Training

+ User Support

Prepare Observations

Aspro2

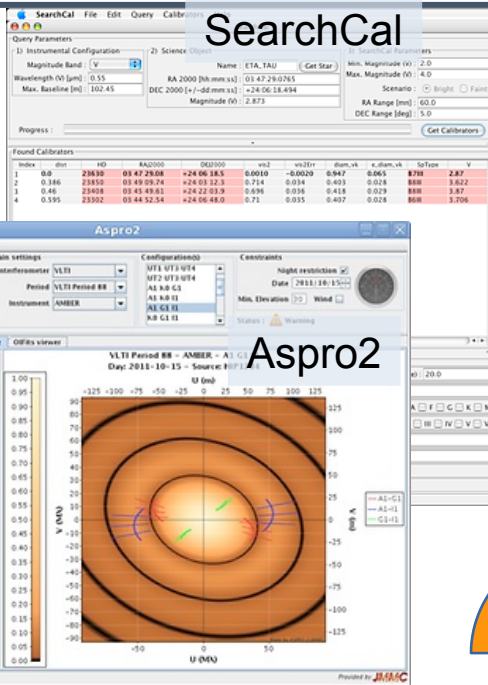
CDS Catalogs

JSDC  
JMDC

OiDB

L0 to L3  
DataBases

Journal



Reduce data

amdlib  
pndrs

View Data

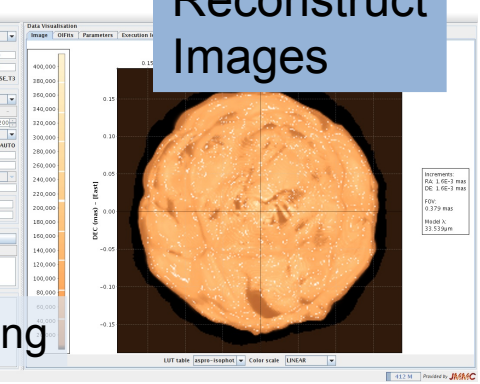
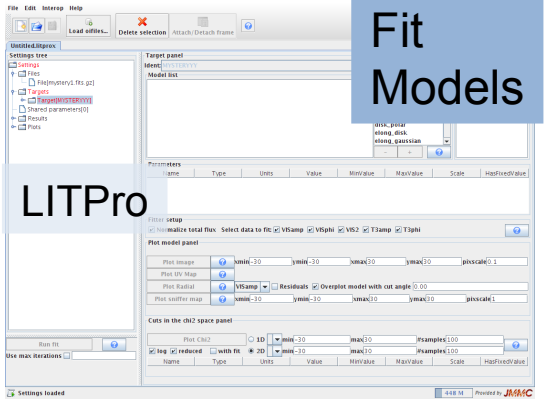
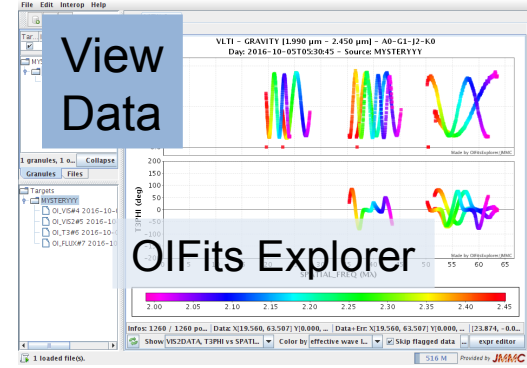
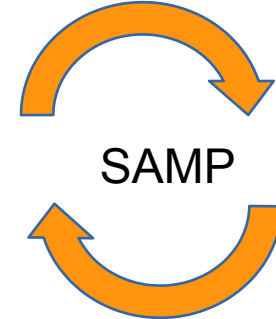
OIFits Explorer

Fit Models

LITPro

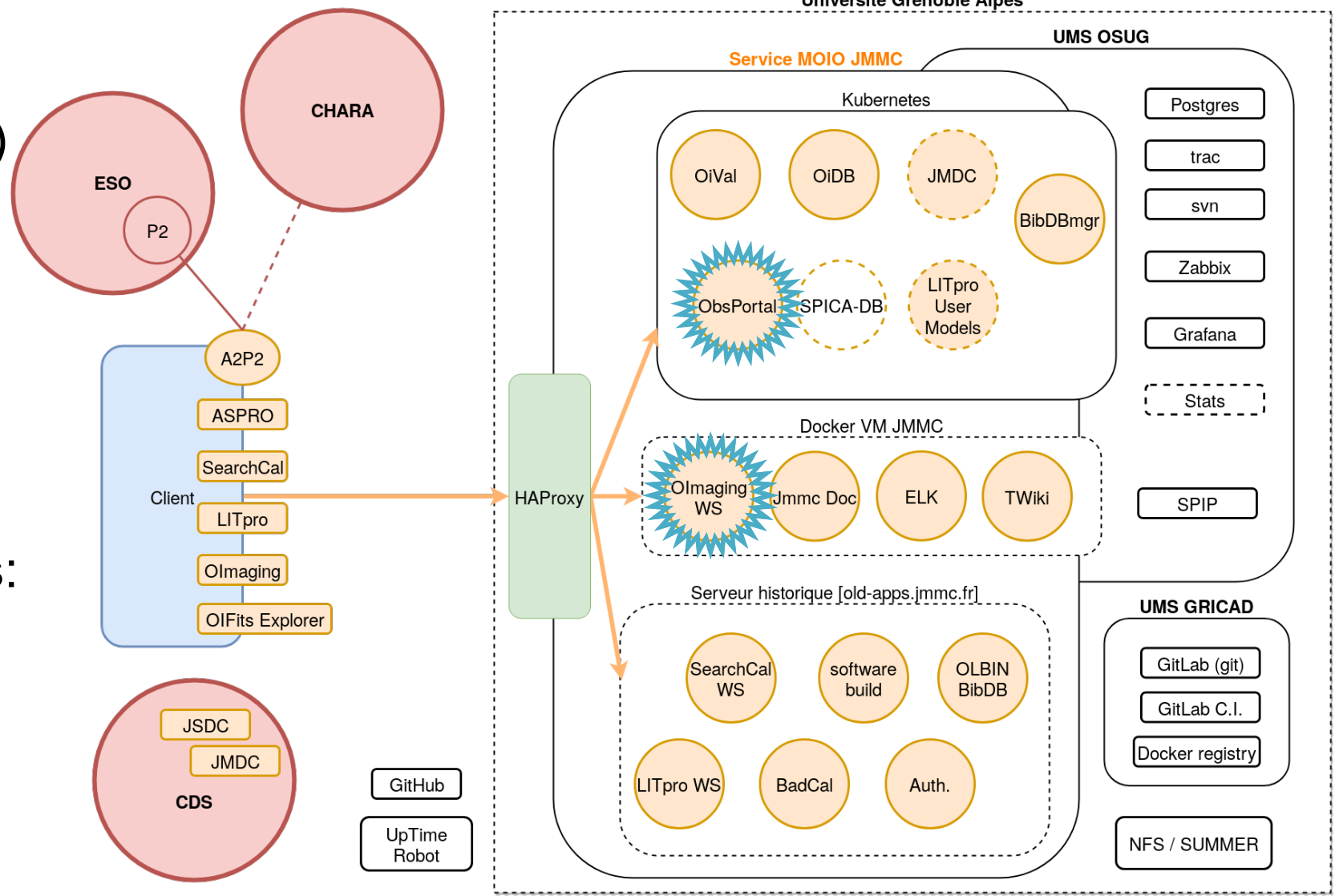
Reconstruct Images

Olmaging



# Behind the scene, JMMC servers updated & *alive* !

- Infrastructure moving to containers (docker, k8s)
- Plenty of software / services to maintain  
e.g.: BADCAL relies on Astrogrid DSA no more GILDAS related ;)  
savot 4, taplib 2, votable 1.1 à 1.4
- New software / services:
  - Obs Portal (2020)
  - *SPICA-DB* (2021)





# ASPRO 2 & Obs Portal

## Integrate (VLT) observation logs in ASPRO2





# Obs logs

ASPRO2 calls ObsPortal cone-search (VOTable), later TAP queries ?

Pourquoi ?

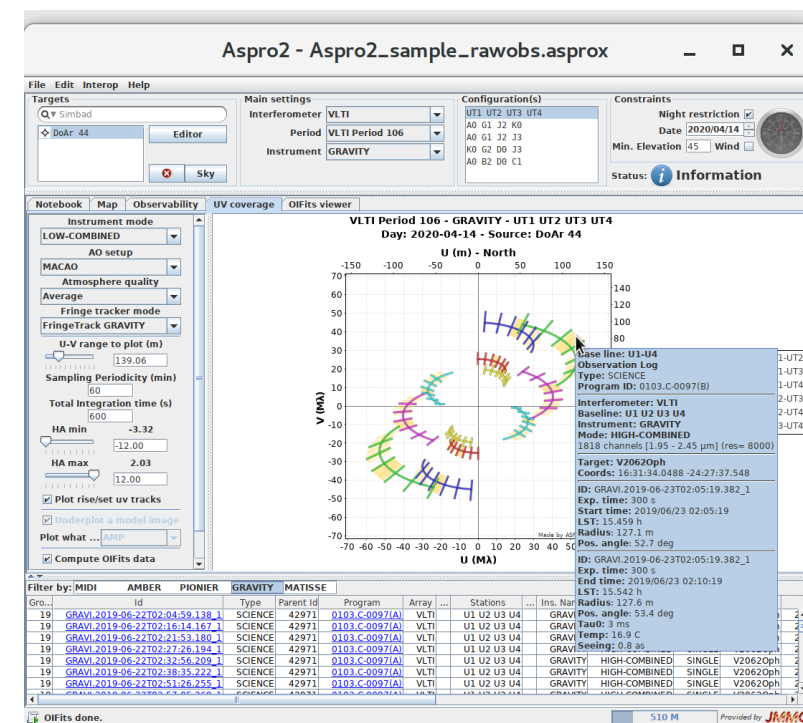
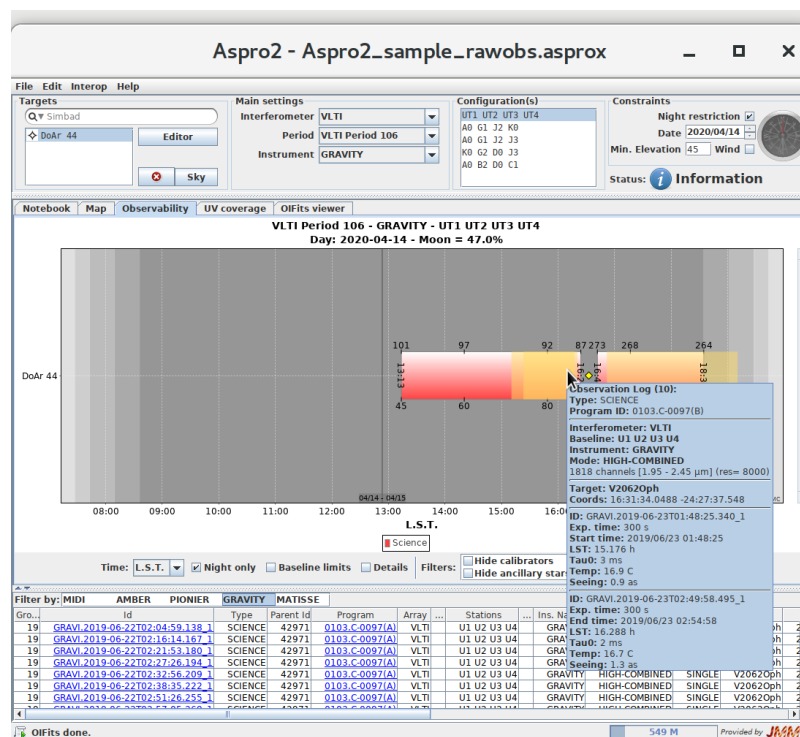
Besoin d'analyser les headers FITS pour trouver points UVs (get header: très lent)

Problème: cross identification des targets car coordonnées pointage dans header / eso TAP

- Get latest obs logs from obs portal
  - Show table + details in tooltips
  - Filter obs logs by instrument (more filters to come)

Show UV tracks of (filtered) obs logs

Note: each ESO OB gives projected baseline (radius + pa) + mjd times



# JMMC Obs Portal

<http://obs.jmmc.fr/>

(Python / postgresql web app)

*Blue / Green (k8s + docker) deployments !*

<https://gricad-gitlab.univ-grenoble-alpes.fr/OSUG/JMMC/jmmc-obsportal>

<https://gricad-gitlab.univ-grenoble-alpes.fr/OSUG/JMMC/jmmc-obsportal-kubernetes>

- Observation Logs VLTi
  - all instruments
  - ESO sync every hour (TAP)
- OiDB sync => L0 ESO

- Future:
  - VO TAP interface
  - Improved cross identification (% jsdc)

## ObsPortal

The [JMMC](#) ObsPortal service provides both a web interface and a cone-search service (TAP in the future) on its database containing raw optical interferometry observations (L0):

- **ESO archive** provides VLTi observations (observing blocks & exposures). Supported instruments are MIDI, AMBER, PIONIER, GRAVITY, MATISSE.

The [JMMC](#) also provides the [OiDB](#) service that contains published & science-ready datasets (L2, L3) in the OIFITS file format.

Please contact the [JMMC user support](#) for any remark or issue on this service.

## Change log

- 2020.05.05: Release 20.05:
  - Automatic synchronization (ESO TAP)
  - Added UV points per baseline and atmospheric conditions
  - Improved performance: indexes + rewritten VOTable writer
  - Improved header validation
- 2020.02.25: First release, integrated in ASPRO2 20.03

## Database statistics

Header count	1035757
Target count	35277
Observation count	47263
Exposure count	342284
Valid exposure count	336192 (98.22%)
Exposure Date min	2003-06-14 07:13:36.000
Exposure Date max	2021-03-23 08:57:49.326
<b>Header last ModificationDate</b>	<b>2021-03-23 09:01:38 UTC+0000</b>

# Obs Portal / *health*

<http://obs.jmmc.fr/health>

Health check (liveness probe):

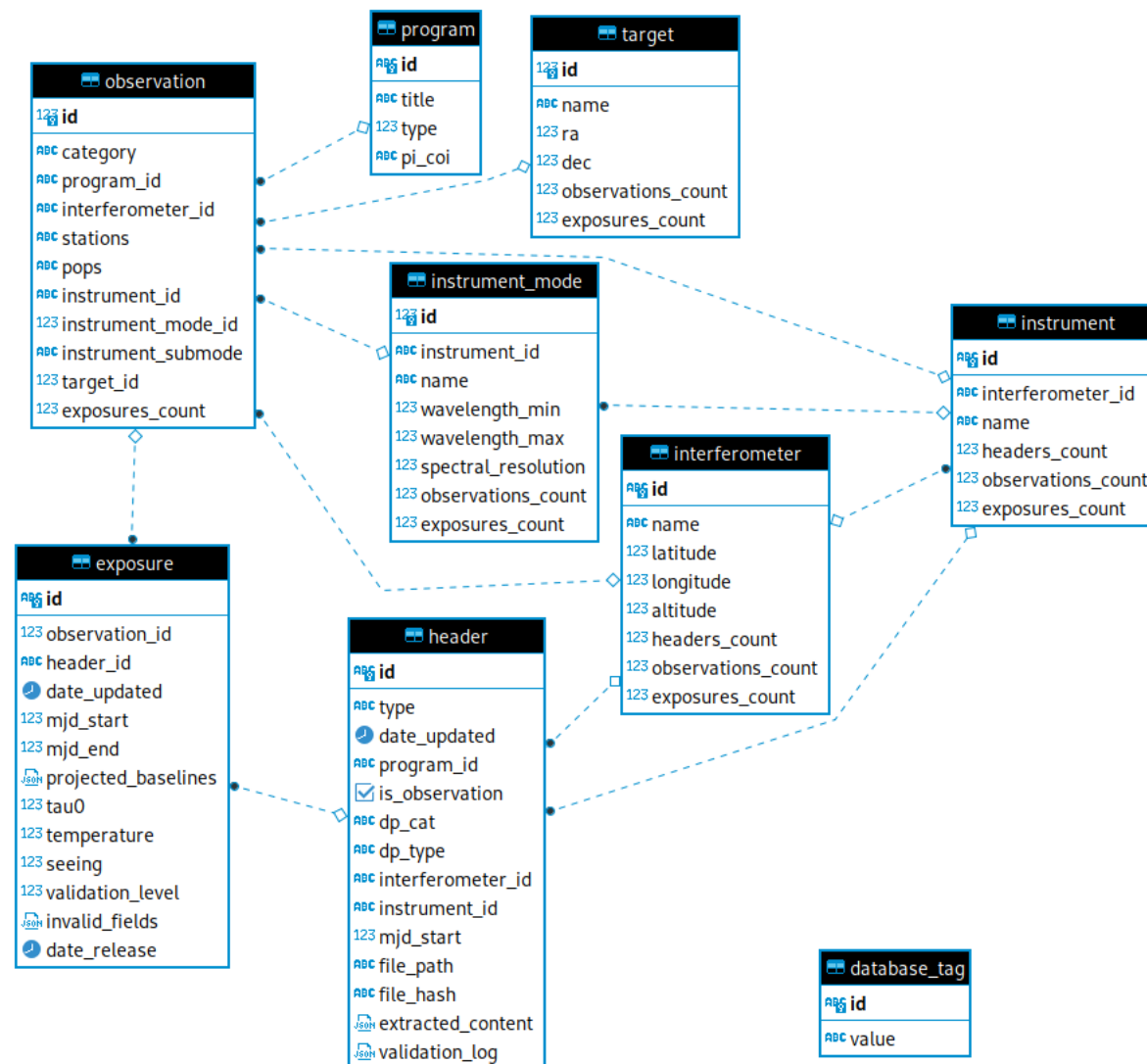
- server code tag
- container start
- database connection
- database schema tag
- database content (SYNC):
  - start / end (job)
  - last\_mod\_date (tap eso)
  - differential sync !

Information	Value
Server start	2021-03-02 10:23:43.181707
Version	ObsPortal2021_02_09_b2
DB Tag [database_version]	obsportal_2020_06_05
DB Tag [synchronize_end]	2021-03-23 09:03:46.581548
DB Tag [synchronize_start]	2021-03-23 09:03:13.645962
Root directory	/app/obsportal
Data directory	/data/cache
Logs directory	/logs
Tmp directory	/tmp
Variant	green
DB Host	osug-postgres.u-ga.fr
Database	obs
DB user	jmmc_obs
DB connections (Server instance)	Pool size: 10 Connections in pool: 1 Current Overflow: -8 Current Checked out connections: 1
DB connections (Global)	1 active   1 idle



# ObsPortal data model

- Observation (exposure)
- Target (position)
- Array / Instrument / observing mode
- MJD / obs timestamps
- Weather conditions
- Observation data model ? (ObsCore)



# Aspro2 data models (xsd)

<http://apps.jmmc.fr/~swmgr/xsddoc/aspro-oi/0.1/>

- Interferometer / instrument model
- Observation model
- OB model
- RawObs model (obsportal)
- *array / instrument database ?*
- *obs\_prep database (eso p1) ?*
- *ob database (eso p2) ?*
- *obs\_log database (obsportal)*
- Interopérabilité VOTable (SearchCal, Simbad & Vizier, topcat)
  - ~ Observation => Observation model ?
  - ~ Targets: ucd => Source / Catalog model ?





# JSDC 3 / SearchCal 6

Important JSDC upgrade to get latest data from  
SIMBAD / GAIA DR2 / MDFC



# JSDC pipeline

**JSDC = compilation des catalogues (TYCHO2 x 2MASS x GAIA) x SIMBAD (IDS, sptype, objtypes) => diamètres stellaires**

- Préparation Candidates (ASCC = TYCHO2 x SIMBAD x MDFC) (stilts) ~ 30gb
- SearchCal scenario BRIGHT or FAINT (C++/asciitools) ~30gb
- Post traitement (stilts)
- Total ~ 100Gb

- Lien avec Provenance ?

~ workflow (entier) ?

~ pour chaque colonne

~ pour chaque objet (log)

```
ID_HD ID_HIP ID_DM ID_TYC1 ID_TYC2 ID_TYC3 ID_2MASS ID_SB9 ID_WDS ID_AKARI ID_WISE ID_GAIA
ID_SBC9 ID_GAIA_LOG ID_TARGET TIME_DATE XMATCH_LOG XMATCH_MAIN_FLAG XMATCH_SIMBAD_SEP
XMATCH_ASCC_N_MATES XMATCH_ASCC_SEP XMATCH_ASCC_SEP_2ND XMATCH_HIP_N_MATES XMATCH_HIP_SEP
XMATCH_HIP_SEP_2ND XMATCH_2MASS_N_MATES XMATCH_2MASS_SEP XMATCH_2MASS_SEP_2ND
XMATCH_WISE_N_MATES XMATCH_WISE_SEP XMATCH_WISE_SEP_2ND XMATCH_GAIA_N_MATES XMATCH_GAIA_SCORE
XMATCH_GAIA_SEP XMATCH_GAIA_DMAG XMATCH_GAIA_SEP_2ND GROUP_SIZE POS_EQ_RA_MAIN POS_EQ_RA_ERROR
POS_EQ_DEC_MAIN POS_EQ_DEC_ERROR POS_EQ_PMRA POS_EQ_PMRA_ERROR POS_EQ_PMDEC
POS_EQ_PMDEC_ERROR POS_PARLX_TRIG POS_PARLX_TRIG_ERROR SPECT_TYPE_MK OBJ_TYPES CODE_VARIAB_V1
CODE_VARIAB_V2 VAR_CLASS CODE_MULT_FLAG CODE_BIN_FLAG ORBIT_SEPARATION_SEP1 ORBIT_SEPARATION_SEP2
VELOC_HC VELOC_HC_ERROR VELOC_ROTAT TEFF_GAIA TEFF_GAIA_LOWER TEFF_GAIA_UPPER DIST_GAIA
DIST_GAIA_LOWER DIST_GAIA_UPPER PHOT_JHN_B PHOT_JHN_B_ERROR PHOT_MAG_Bp PHOT_MAG_Bp_ERROR
PHOT_JHN_V PHOT_JHN_V_ERROR PHOT_JHN_B-V PHOT_JHN_B-V_ERROR PHOT_COUS_V-I PHOT_COUS_V-I_ERROR
PHOT_COUS_V-I_REFER_CODE PHOT_MAG_G PHOT_MAG_G_ERROR PHOT_JHN_R PHOT_JHN_R_ERROR PHOT_MAG_Rp
PHOT_MAG_Rp_ERROR PHOT_JHN_I PHOT_JHN_I_ERROR PHOT_COUS_I PHOT_COUS_I_ERROR PHOT_JHN_J
PHOT_JHN_J_ERROR PHOT_JHN_H PHOT_JHN_H_ERROR PHOT_JHN_K PHOT_JHN_K_ERROR CODE_QUALITY
PHOT_JHN_L PHOT_JHN_L_ERROR PHOT_JHN_M PHOT_JHN_M_ERROR PHOT_JHN_N PHOT_JHN_N_ERROR
CODE_QUALITY_WISE PHOT_FLUX_IR_9 PHOT_FLUX_IR_9_ERROR PHOT_FLUX_IR_12 PHOT_FLUX_IR_12_ERROR
PHOT_FLUX_IR_18 PHOT_FLUX_IR_18_ERROR IR_FLAG PHOT_FLUX_L PHOT_FLUX_L_ERROR PHOT_FLUX_M
PHOT_FLUX_M_ERROR PHOT_FLUX_N PHOT_FLUX_N_ERROR
HD HIP DM TYC1 TYC2 TYC3 2MASS SBC9 WDS AKARI WISE GAIA SIMBAD opt TARGET_ID jd XMATCH_LOG
XMATCH_MAIN_FLAG XM_SIMBAD_sep XM_ASCC_n_mates XM_ASCC_sep XM_ASCC_sep_2nd XM_HIP_n_mates XM_HIP_sep
XM_HIP_sep_2nd XM_2MASS_n_mates XM_2MASS_sep XM_2MASS_sep_2nd XM_WISE_n_mates XM_WISE_sep
XM_WISE_sep_2nd XM_GAIA_n_mates XM_GAIA_score XM_GAIA_sep XM_GAIA_dmagn XM_GAIA_sep_2nd GroupSize RAJ2000
e_RAJ2000 DEJ2000 e_DEJ2000 pmRa e_pmRa pmDec e_pmDec plxe_Plx SpType ObjTypes VarFlag1 VarFlag2
VarFlag3 MultFlag BinFlag sep1 sep2 RadVel e_RadVel RotVel gaia_Teff gaia_Teff_lo gaia_Teff_hi gaia_dist gaia_dist_lo
gaia_dist_hi B e_B Bp e_Bp Ve_V B-V e_B-V V-Icous e_V-Icous ref_V-Icous G e_G Re_R Rp e_Rp l e_l Icous
e_Icous J e_J He_H K e_K Qflag L e_L M e_M N e_N Qph_wise S09 e_S09 F12 e_F12 S18 e_S18 IRFlag
Lflux_med e_Lflux_med Mflux_med e_Mflux_med Nflux_med e_Nflux_med
```

SearchCal meta-data:

<http://apps.jmmc.fr/exist/apps/myapp/index.html>

# JSDC3: 475 000 stars ... to 2.5m stars !

## Changes:

- Crossmatch +++ : best in 3as neighbourhood + XM flags = No duplicates.  
"CalFlag bit 3 set if the star has neighbours within 0.5 as (GAIA) or 1.0 as (2MASS)"
- Data: SIMBAD, GAIA DR2 (better ra/dec, pm, teff, dist), MDFC (flag, flux)
- [JSDC3 BRIGHT EA](http://jmmc.fr/~bourgesl/sclsvr_JSDC/JSDC_2020/LAST/) : http://jmmc.fr/~bourgesl/sclsvr\_JSDC/JSDC\_2020/LAST/
- [JSDC3 FAINT EA](http://jmmc.fr/~bourgesl/sclsvr_JSDC/JSDC_FAINT_2020/LAST/) : http://jmmc.fr/~bourgesl/sclsvr\_JSDC/JSDC\_FAINT\_2020/LAST/

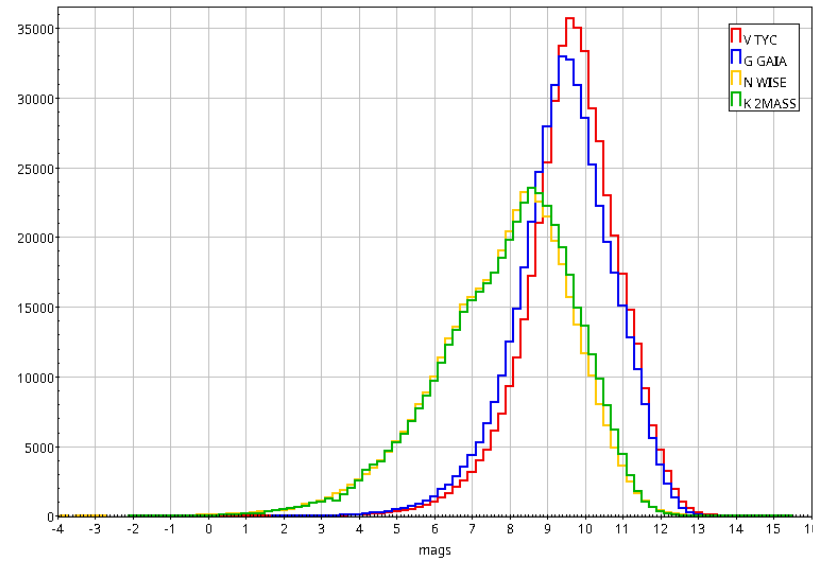
Services: [SearchCal 6 EA](#): 2021 ? [GetStar EA](#)

## Perspectives:

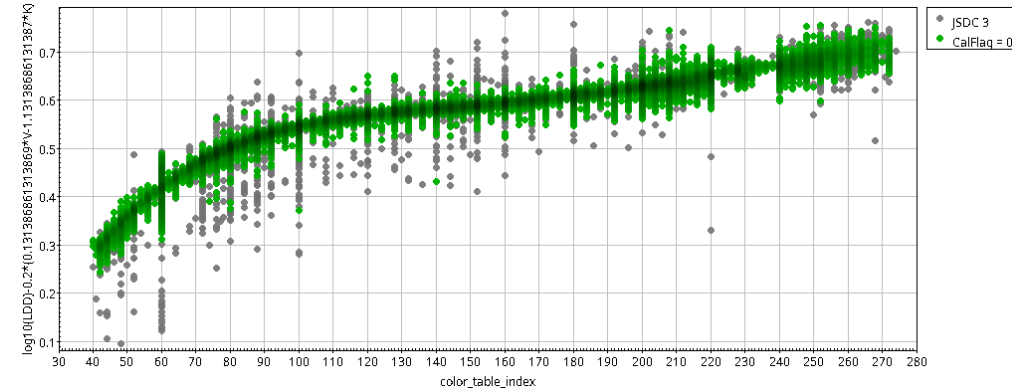
- Publish both Bright / Faint catalogs in 2021: 2.5m star (TYCHO2) in JMMC TAP interface + CDS
- Update SearchCal client (savot -> stilts ?) => client TAP (jsdc)

Total Rows: 474963

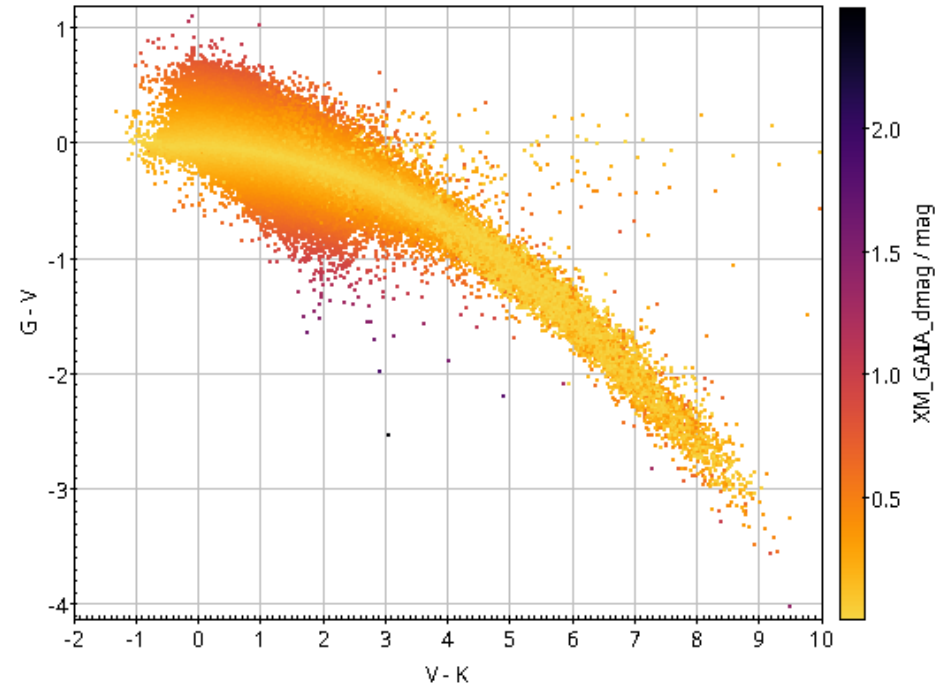
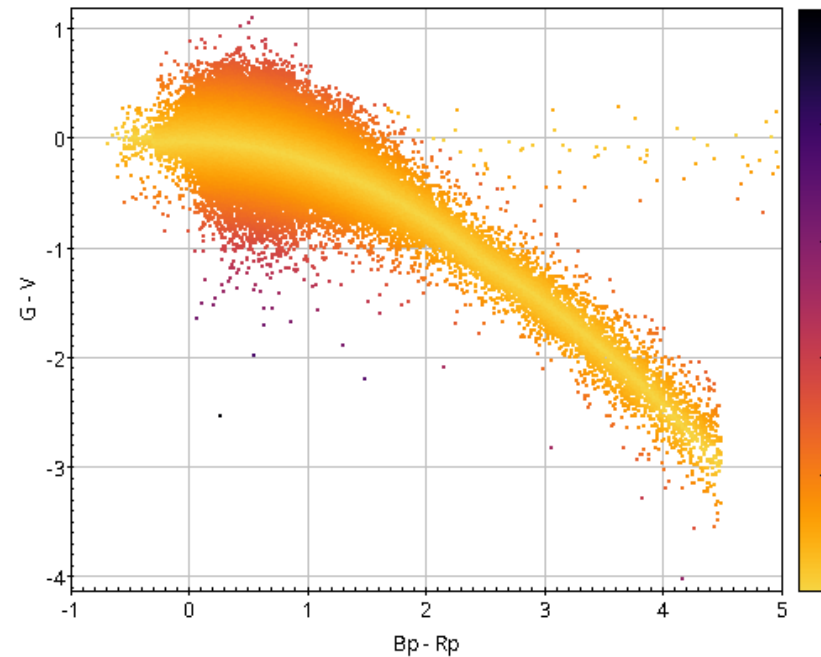
column	good
SIMBAD	474963
GAIA	471475
TYC1	473651
TYC2	473651
TYC3	474963
2MASS	474963
WISE	470294
AKARI	153541
HD	245091
HIP	105272
DM	348198
SBC9	2454
WDS	39400



### JSDC 3 BRIGHT EA:



### GAIA G color relations used by crossmatch :





# GetStar VOTable (1.1 !)

GetStar is the JMMC star resolver (simbad + jsdc data)

~ 100 properties (2.5m stars)

Very Old VOTable format:

~ Votable 1.1 : old UCDs 1.0 (like dmrole)

~ Groups (property + origin / confidence) : prov ?

```

80 <PARAM name="ConfidenceIndexes" datatype="int" value="0">
81 <VALUES>
82 <OPTION name="0" value="NO" />
83 <OPTION name="1" value="LOW" />
84 <OPTION name="2" value="MEDIUM" />
85 <OPTION name="3" value="HIGH" />
86 </VALUES>
87 </PARAM>
88 <PARAM name="OriginIndexes" datatype="int" value="0">
89 <VALUES>
90 <OPTION name="0" value="NO CATALOG" />
91 <OPTION name="1" value="MIXED CATALOG" />
92 <OPTION name="2" value="computed" />
93 <OPTION name="3" value="II/297/irc" />
94 <OPTION name="4" value="I/280" />
95 <OPTION name="5" value="I/280B" />
96 <OPTION name="6" value="V/50/catalog" />
97 <OPTION name="7" value="II/225/catalog" />
98 <OPTION name="8" value="B/denis" />
99 <OPTION name="9" value="J/A+A/413/1037/table1" />
100 <OPTION name="10" value="I/196/main" />
101 <OPTION name="11" value="I/239/hip_main" />
102 <OPTION name="12" value="I/311/hip2" />
103 <OPTION name="13" value="J/A+A/393/183/catalog" />

```

Send VOTable (samp)

GetStar software (In case of problem, please report to [jmmc-user-support@jmmc.fr](mailto:jmmc-user-support@jmmc.fr))  
 Request parameters: -objectName Sirius -format vot  
 Generated on (UTC): 2021-03-22T18:09:25

Property	Value	(Unit)	Description
HD	48915		HD identifier, click to call Simbad on this object
HIP	32349		HIP identifier, click to call Simbad on this object
DM	-1601591		DM number, click to call Simbad on this object
TYC1	5949		TYC1 number from Tycho-2, click to call Simbad on this object
TYC2	2777		TYC2 number from Tycho-2, click to call Simbad on this object
TYC3	1		TYC3 number from Tycho-2, click to call Simbad on this object
2MASS	06450887-1642566		2MASS identifier, click to call VizieR on this object
SBC9	416		SBC9 identifier, click to call VizieR on this object
WDS	06451-1643		WDS identifier, click to call VizieR on this object
AKARI	200102088		AKARI source identifier, click to call VizieR on this object
WISE	J064508.34-164310.1		WISE identifier, click to call VizieR on this object
GAIA			GAIA DR2 identifier, click to call VizieR on this object
SIMBAD	* alf CMa		Simbad Identifier, click to call Simbad on this object
opt	U		2MASS: Associated optical source (opt) 'T' for Tycho 2 or USNO A 2.0
TARGET_ID	Sirius		The target identifier asked to CDS
jd		d	(jdate) Julian date of source measurement
XMATCH_MAIN_FLAG	0		xmatch flags for main catalogs (ASCC, GAIA, 2MASS) (internal)
XM_SIMBAD_sep	0.3390877	as	Angular Separation of the first object in SIMBAD
GroupSize	0		The number of close targets within 3 as found in the ASCC or catalogs
RAJ2000	06 45 08.913260	h:m:s	Right Ascension - J2000
e_RAJ2000		mas	Standard error in Right Ascension * cos(Declination) - J2000
DEJ2000	-16 42 57.870999	d:m:s	Declination - J2000
e_DEJ2000		mas	Standard error in Declination - J2000

NO LOW MEDIUM HIGH NO CATALOG MIXED CATALOG computed AKARI ASCC-2.5 ASCC-2.5 BSC CIO DENIS J-K DENIS HIC HIP1 HIP2 LBST 2MASS Mezard

```

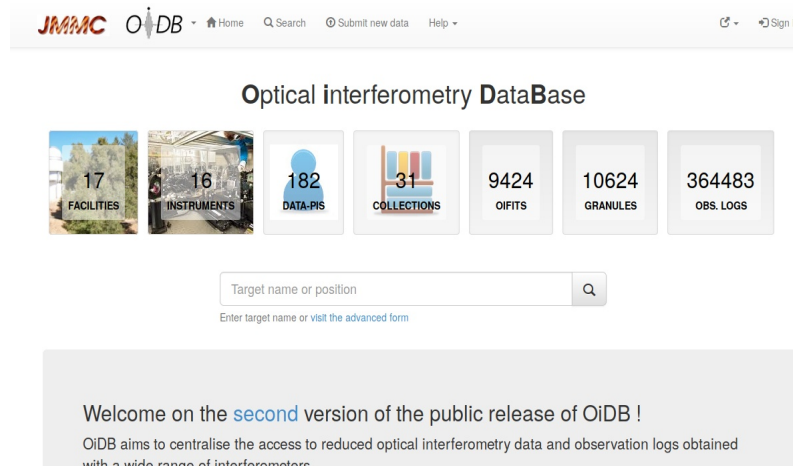
<FIELD name="HD" ID="col0" ucd="ID_HD" datatype="char" arraysize="*">
  <DESCRIPTION>HD identifier, click to call Simbad on this object</DESCRIPTION>
  <!-- values (1) origins (1 [I/280] ) confidences (1 [HIGH] ) -->
  <LINK href="http://simbad.u-strasbg.fr/simbad/sim-id?protocol=html&Ident=HD${HD}" />
</FIELD>
<FIELD name="HD.origin" ID="col1" ucd="REFER_CODE" datatype="int" type="hidden">
  <DESCRIPTION>Origin index of property HD</DESCRIPTION>
</FIELD>
<FIELD name="HD.confidence" ID="col2" ucd="CODE_QUALITY" datatype="int" type="hidden">
  <DESCRIPTION>Confidence index of property HD</DESCRIPTION>
</FIELD>
<GROUP name="HD" ucd="ID_HD">
  <DESCRIPTION>HD with its origin and confidence indexes and its error when available</DESCRIPTION>
  <FIELDref ref="col0" />
  <FIELDref ref="col1" />
  <FIELDref ref="col2" />
</GROUP>

```





# OiDB 2.0 online



·UI enhancements:

- search form, result table
- quick plots, data quality plots / TF...
- show ancillary links accross various calibration levels L(0-3)<->L(0-3)

·New categories for data collections: simulations, private (SUV)

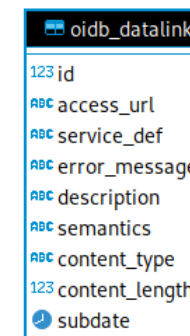
·Improved obs log ingestion (L0) : synchronized with Obs Portal

·Problème de cross-identification des sources (aussi)

*ObsCore in OiDB, less rich / less metadata than ObsPortal database :*

*"Fake" datalinks : to be semi hacked and made compliant*

*( not handled by TapHandle !! )*



oidb	
123 id	
ABC dataproduct_type	
123 calib_level	
ABC target_name	
ABC obs_id	
ABC obs_collection	
ABC obs_creator_name	
ABC obs_release_date	
ABC obs_publisher_did	
ABC bib_reference	
ABC data_rights	
ABC access_url	
ABC access_format	
123 access_estsize	
123 s_ra	
123 s_dec	
123 s_fov	
123 s_region	
123 s_resolution	
123 t_min	
123 t_max	
123 t_exptime	
123 t_resolution	
123 em_min	
123 em_max	
123 em_res_power	
ABC o_ucd	
ABC pol_states	
ABC facility_name	
ABC instrument_name	
ABC instrument_mode	
123 quality_level	
123 nb_channels	
123 nb_vis	
123 nb_vis2	
123 nb_t3	
ABC keywords	
ABC subdate	
ABC progid	
ABC datapi	
ABC access_md5	
ABC interferometer_stations	



# OiDB screenshots of <https://oidb.jmmc.fr>

L band observation of Kappa Tuc

Any Collection

L3 - Published calibrated OIFITS / suv

L band observation of Kappa Tuc

L3 - Published calibrated OIFITS / public

Large granulation cells on the surface of the giant star  $\pi$ 1 Gruis

AMBER and MIDI observations of V838 Mon

Optical interferometry and Gaia measurement uncertainties reveal the physics of...

T Pyx AMBER observations

Numerical simulations and infrared spectro-interferometry reveal the wind coll...

The R CrB star V854 Cen

Infrared Interferometric Three-dimensional Diagnosis of the Atmospheric Dynamic...

The structure of disks around intermediate-mass young stars from mid-infrared i...

iot Peg

L3 - Published calibrated OIFITS / VizieR

VLTI observations of V4334 Sgr (Chesneau+, 2009)

Milli-arcsecond imaging of SS Lep (Blind+, 2011)

(epsilon) Aur visibility measurements (Mourard+, 2012)

Interferometry of (alpha) Eri (Domiciano de Souza+, 2012)

VLTI/MIDI AGN Large Program observations (Burtcher+, 2013)

The VLTI/MIDI survey of Massive YSOs (Boley+, 2013)

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Sign In

Filters

Object: Name or J2000 coordinates Radius: 2 arcmin Date of observation: after YYYY-MM-DD before YYYY-MM-DD

Instrument: Any Instrument Wavelength range: any value Data reduction level: L0, L1, L2, L3 Availability: Public, Restricted, All

Collection: FU Orionis MIRCX DataPI: Any DataPI Program: program id Obsid: observation id

10 rows max. per page, sorted by Date descending with all columns

Search Reset

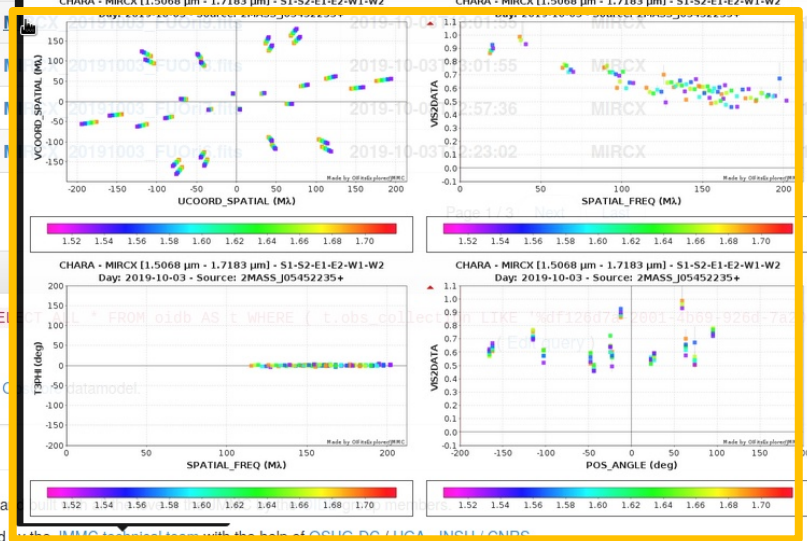
Results 13 records from 0 obs logs and 13 oifits files

Page 1 / 3 Next Last

	L	target_name	date	t_min	instrument_name	wlen_min	wlen_max	nb_channels	datapi
	3	2MASS_J05452235+	2019-10-03T13:07:40	MIRCX	1.50678150	1.71825300	8	Aaron Labdon	
	3	2MASS_J05452235+	2019-10-03T13:01:55	MIRCX	50678150	1.71825300	8	Aaron Labdon	
	3	2MASS_J05452235+	2019-10-03T13:25:36	MIRCX	50678150	1.71825300	8	Aaron Labdon	
	3	2MASS_J05452235+	2019-10-03T13:23:02	MIRCX	50678150	1.71825300	8	Aaron Labdon	

Contact:

- Aaron Labdon (data creator)
- Aaron Labdon (data PI)
- Release date: 2019-10-03T13:03:21



Results for ADQL query

```
SELECT * FROM oidb AS t WHERE ( t.obs_collection LIKE '%MIDI%' OR t.obs_collection LIKE '%MIRC%' ) ORDER BY t_min DESC
```

16b69c4%

Provided metadata are an extension on top of the CHARA-MIRCX dataset

## Add calibrated OIFITS files

Step 1 : Upload OIFITS files

Target	Instrument	Instrument mode	Time interval	Quality
+ Add files				

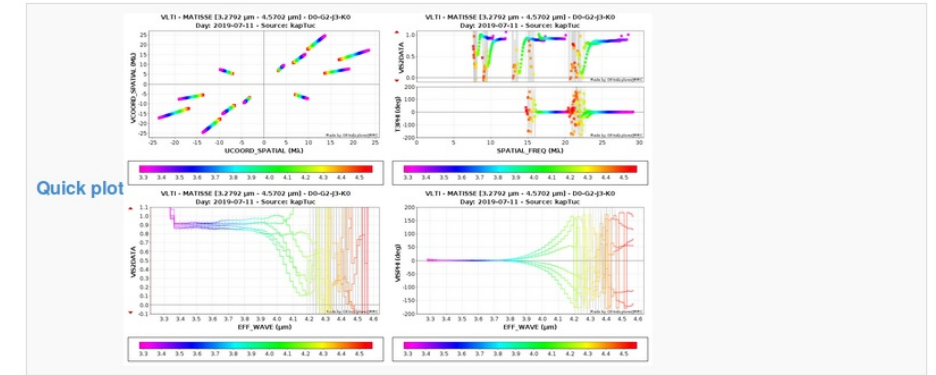
Step 2 : Choose collection

Step 3 : Save

## Contact

Data PI / OBS creator  
Florian Kirchschrager

## Quicklook plots



Quick plot

## Contact Ancillary data

Data PI  
Not present in metadata  
OBS creator  
jmmc-tech-group - Bour

calib_level	id	obs_collection	datapi
0	1293809	ESO VLTI import	<input type="checkbox"/>

## External resources

- [Add the first comment](#)
- [Details progid 0103.C-0725\(A\) on ESO archive](#)
- [Details progid 0103.C-0725\(A\) on JMMC ObsPortal](#)
- [Check or display content in OIFitsValidator](#)

## Ancillary

calib_level	id	name	Data PI
3	1355457	Kappa Tuc	Florian Kirchschrager
3	1355464	Kappa Tuc	Florian Kirchschrager

## External resources

- [Details progid 0103.C-0725\(A\) on ESO archive](#)
- [Details progid 0103.C-0725\(A\) on JMMC ObsPortal](#)
- [Details exposure MATIS.2019-07-11T09:03:31.168\\_1 on JMMC ObsPortal](#)

## Add calibrated OIFITS files

Step 1 : Upload OIFITS files

Target	Instrument	Instrument mode	Time interval	Quality
+ Add files				

Step 2 : Choose collection

Collection details

Collection type

public  
 simulation  
 SUV

Name

Title

Description

Keywords

Data PI

Step 3 : Save





# Evolution, pistes 2021 ?

# SPICA-DB Project @ JMMC

SPICA: instrument "Stellar Parameters and Images with a Cophased Array" visible (6T)  
à venir sur CHARA

SPICA-DB est la base de données pour gérer

- large programs (survey) + proposals -> lien avec Aspro2
- observation logs + quality flags -> Aspro2 / obs portal
- index raw / OIFITS files -> OiDB

Besoin d'une interface web (+ API) pour gérer les programmes d'observation, leur suivi et les résultats (L0 -> L3) intégrés avec SPICA night scheduling / DRS ...

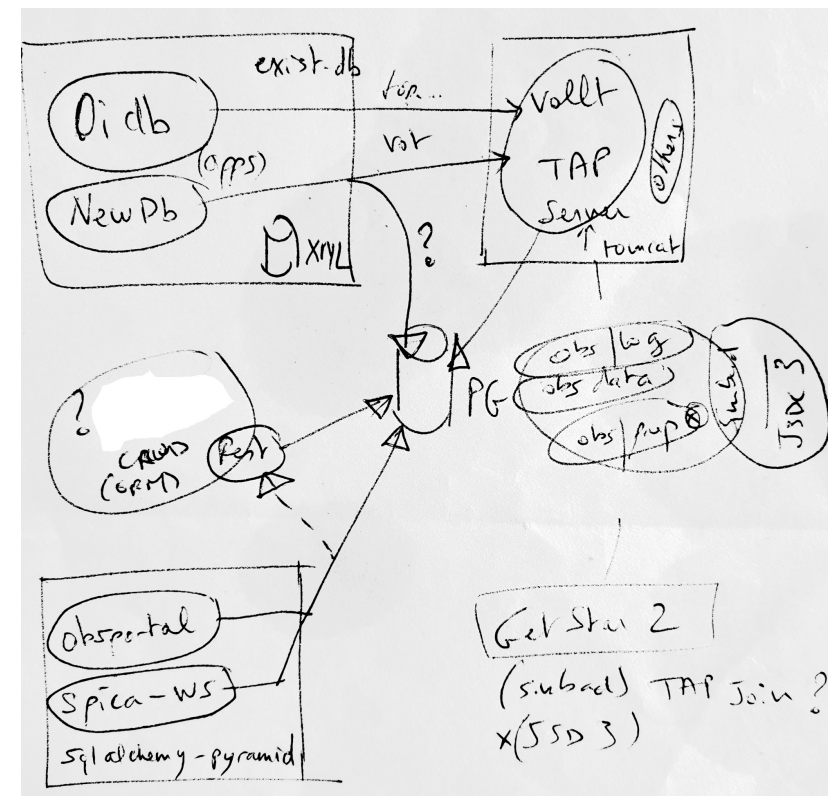


# SPICA-DB Project @ JMMC

SPICA-DB is developed on top of ( OiDB + ObsPortal + TAP ) services + JSDC data + few specific SPICA services to ingest data and manage database (authentication + specific web interface) :

- SPICA query interface
- ASPRO2 enhancements:
  - Handle large programs (**filters**) + target extra informations
  - Manage observations with different instrument, modes (**multi-setup**)
  - **Improve interoperability** (votable / CSV) with VO tools
- Obs Portal: SPICA / CHARA logs + data quality flags
- OiDB: index SPICA OIFITS files (raw, calibrated, data links)

=> **New JMMC TAP server : JSDC + obs portal + OiDB (unified view) !**



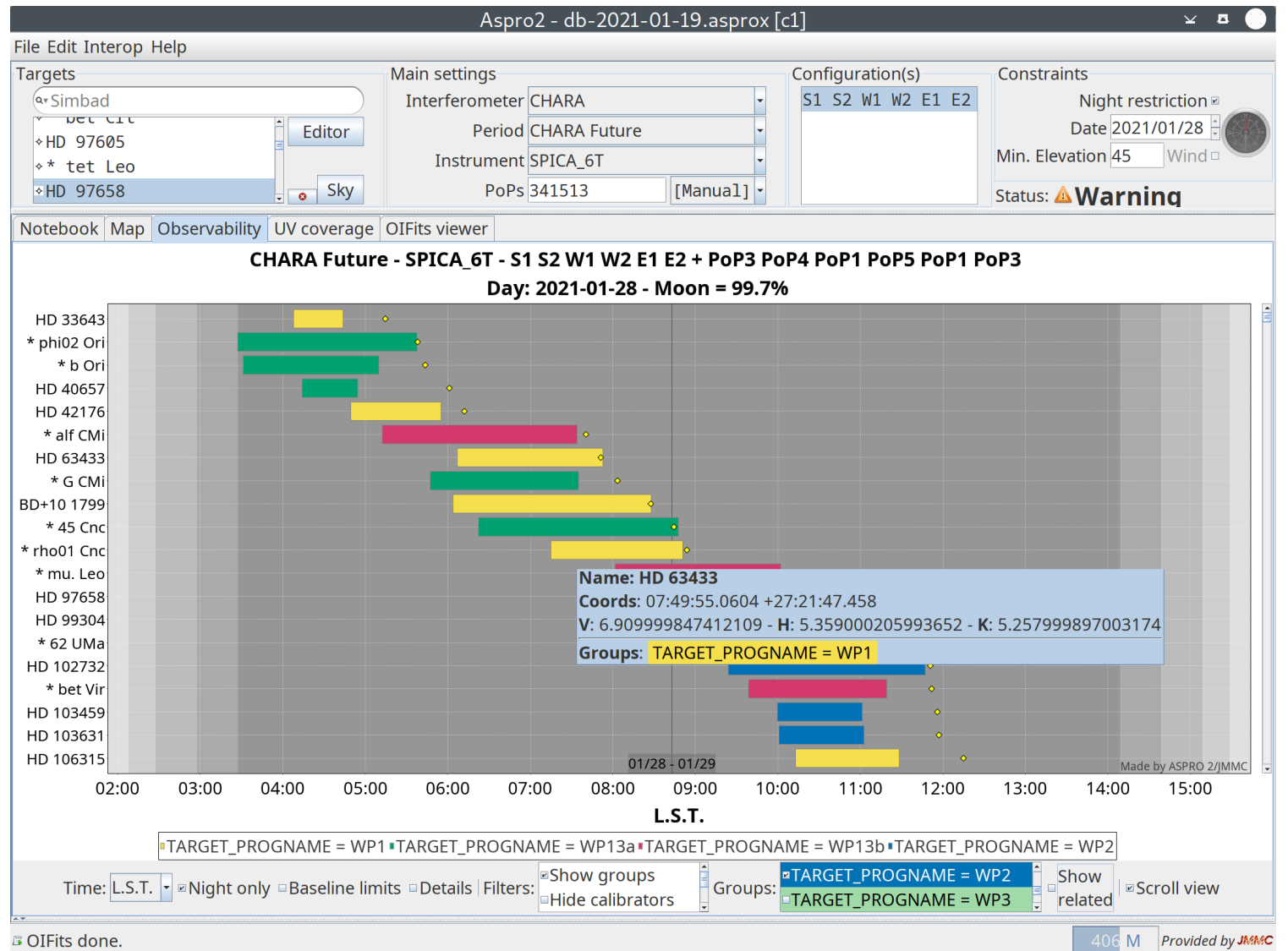
# SPICA-DB Project @ JMMC

Early result:

Import SPICA's Science DB in ASPRO2:

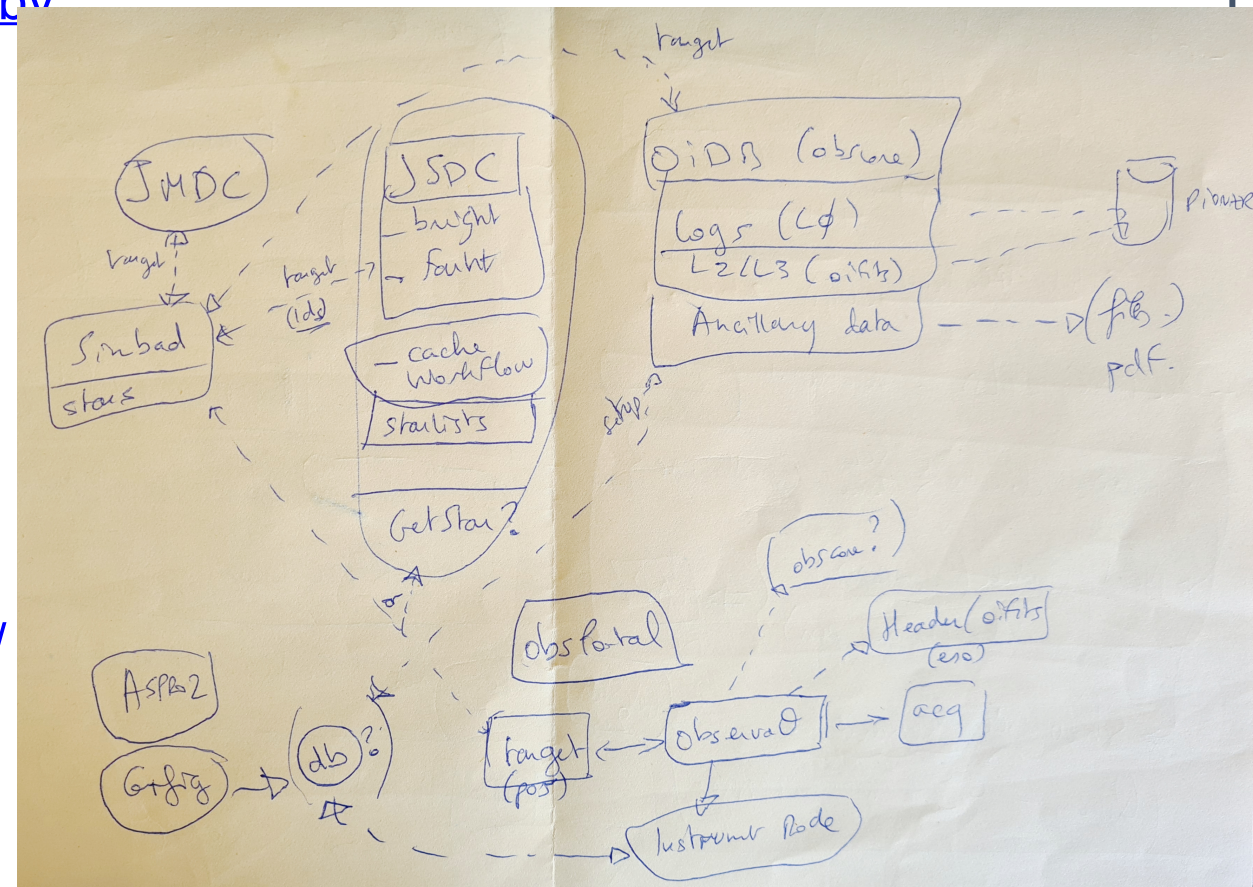
~ 3000 sources grouped by Work Package

(votable + samp : large table)



# TAP / JMMC : database unifiée

- Comparer les schémas du JMMC (data models):  
<http://exist.jmmc.fr/datamodels/index.html?group-by=name>
- Prototype avec vollt (github) :
  - TAP OFFSET (adql 2.1) : OK
  - perf : OK
- Comment remplir tap\_schema à partir d'une votable ? ingestion stiltis (ok) mais manque tap\_schema (votable -> tap\_schema)
- Comment gérer groups (SCL) for confidence / origin (enum) du JSDC ?





# Base unifiée (gold - silver) / archivage

- Utiliser des schémas différents mais 1 seule base  
=> 1 serveur TAP par base
- Intégrer plusieurs bases pg ?  
pg data wrapper : <https://www.postgresql.org/docs/9.5/postgres-fdw.html>  
qui a essayé ?
- Migration des données Gold entre bases prod / dev  
outils de synchronisation de schémas entre bases prod / beta ?
- qui utilise le partitionnement BDD ?

# Simbad clients au JMMC

Biodiversité depuis 10 ans :

- C simcli (getstar)
- Java client (simbad script)
- simbad tap (oidb)

Etude en cours pour voir quelles données sont utilisées et comment simplifier les clients ?

Idée: réutiliser Simbad snapshot ("cache") présent dans JSDC (2.5m) ?

=> stocker des informations SIMBAD dans la base de données JMMC / JSDC... (subset, partiel)

Solution au problème de cross-identification (obs portal, oidb) ...

# Final words

*Nombreux chantiers en cours:*

- *JSDC 3, spica-db*
- *jouvence / évolution architecture (pg + TAP) !*

! Special thanks to Gilles Duvert !

- ( bientôt à la retraite ... un jour...)
- Fervent défenseur du VO et de la technologie :-)
- Responsable de la VO stigmergie au JMMC et au delà

Open more codes :

- <https://github.com/JMMC-OpenDev/>
- <https://github.com/JMMC-OpenDev/jmmc-java-build> to get source code and build all java applications
- <https://gricad-gitlab.univ-grenoble-alpes.fr/OSUG/JMMC>