



Saada in a few words (See Demo)

- **Saada is a Astronomical Database generator**

- Making automatic the process of building a database
- Hosting heterogeneous datasets
- Highlighting scientific content
- Publishing personal data into the VO

- **SaadaDBs are installed on local machines**

- Any Linux Box
 - Java 1.4/Tomcat/Axis
 - PSQL



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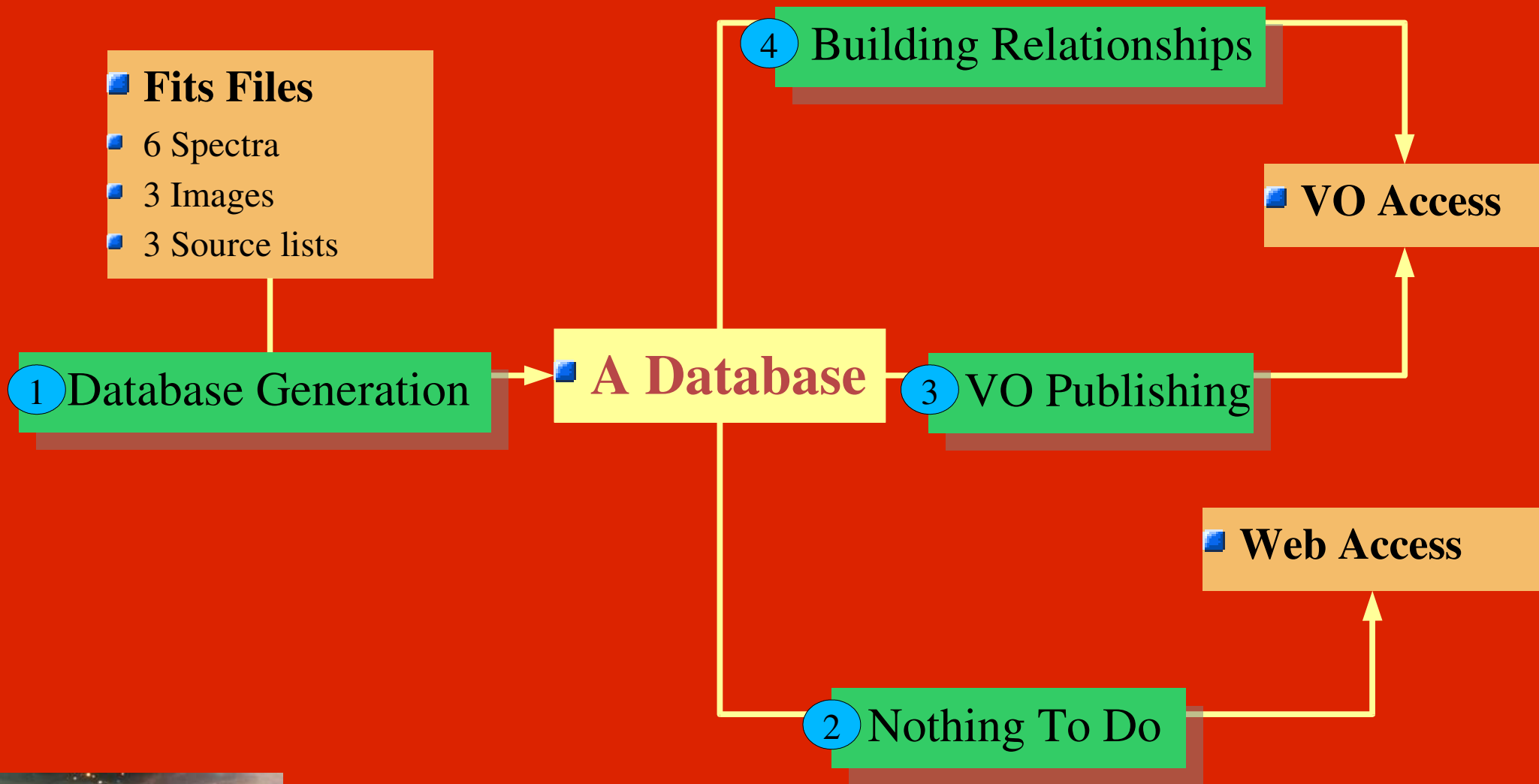
<http://amwdb.u-strasbg.fr/saada>

saada@astro.u-strasbg.fr





Demo Scenario



- Fits Files
- 6 Spectra
- 3 Images
- 3 Source lists

1 Database Generation

A Database

3 VO Publishing

4 Building Relationships

VO Access

Web Access

2 Nothing To Do



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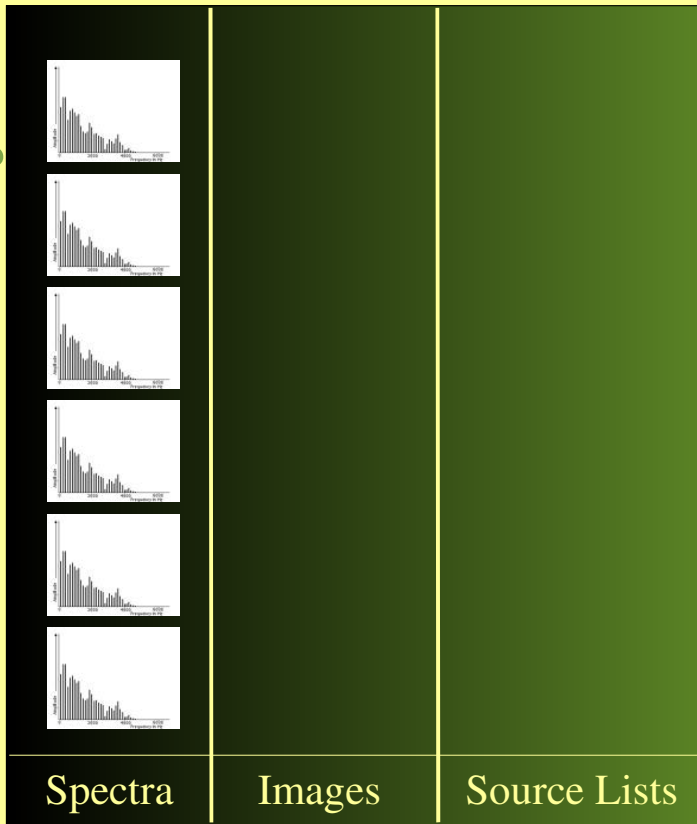




Content of my SaadaDB (FITS)

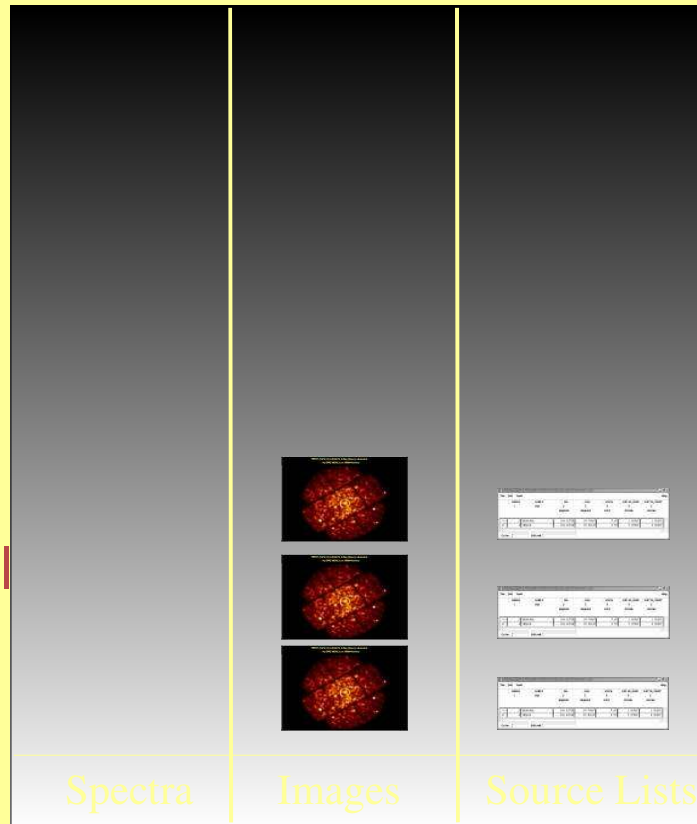
My SaadaDB

GalactPlaneSurvey



Spectra: XMM-Newton SSC
Galactic Plane Survey
Courtesy of P. Guillou et Al.

XMM_DATA



Images: XMM-Newton Catalogue
Sources: XMM-Newton Catalogue



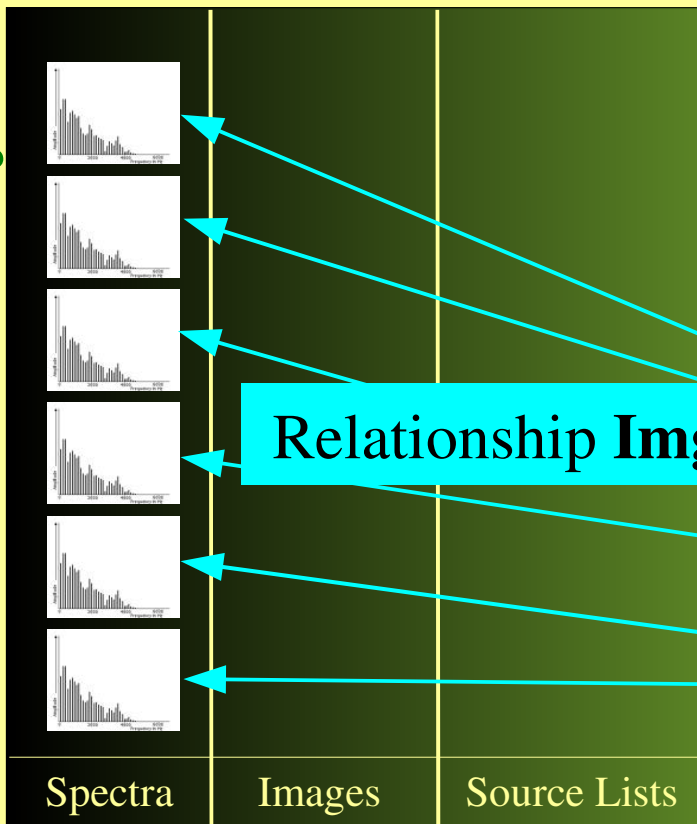


Data Into the VO with Saada

Saada Relationships

My SaadaDB

GalactPlaneSurvey

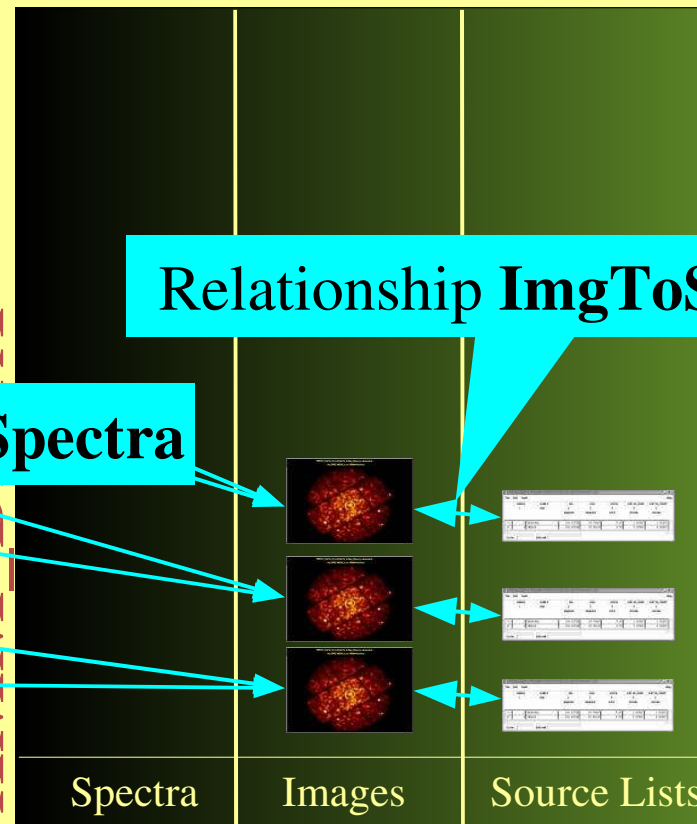


Spectra: XMM-Newton SSC

Galactic Plane Survey

Courtesy of P. Guillou et Al.

XMM-Newton



Images: XMM-Newton Catalogue

Sources: XMM-Newton Catalogue



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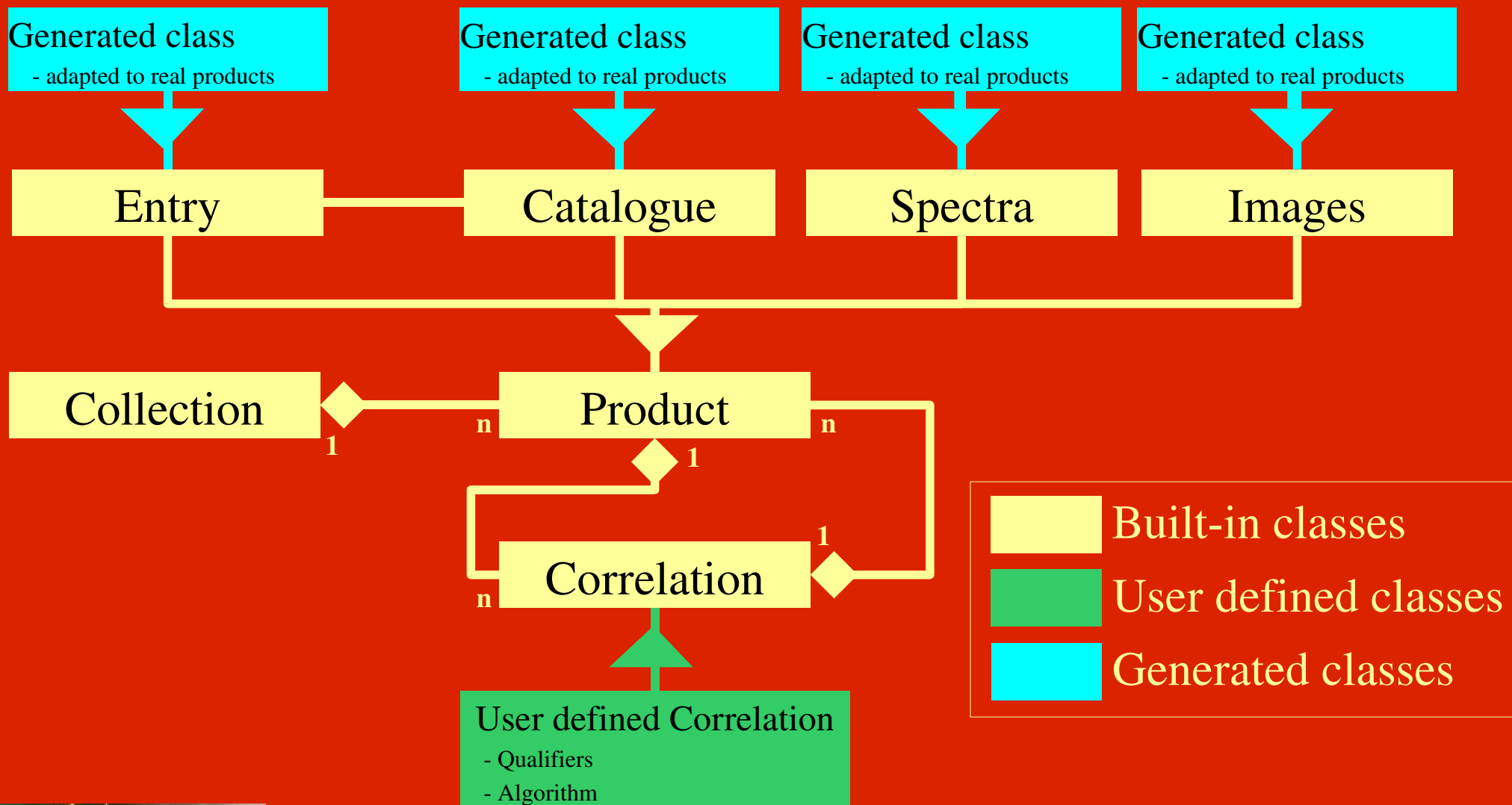
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Data Model





What is Missing ?

■ SSA

- Waiting for both dataloader and autoconfiguration modules to be able to deal with spectral coordinates

■ VOQL

- A Web Service processing VOQLx 0.7.4 queries is already implemented
- Our middle term schedule is to implement a Skynode upon SaadaQL
 - Need an operator to process constraints on Saada correlation patterns.
 - Implementation of a cross-match engine.

■ UCDs

- An automatic UCD assignator is working (using the CDS WS)
 - Need an administration tool
 - Need SaadaQL to be upgraded to work with UCDs.

■ Registry

- Need an interface helping to publish in some registries



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Data Into the VO with Saada

Demo 1: Create a SaadaDB

(1) edit `$$SAADA_HOME/bin/setenv.sh`

```
setenv.sh - /home/michel/Desktop/saada/adass/demo/
File Edit Search Preferences Shell Macro Windows Help
setenv.sh
SAADA_HOME=/home/michel/Desktop/saada/adass/Saada1.4/
ANT_HOME=/home/michel/Desktop/saada/apache-ant-1.6.3
JAVA_HOME=/home/michel/j2sdk1.4.2_08
J2EE_HOME=/home/michel/j2sdkee1.3.1
PSQL_HOME=/raid50/saada/postgres
TOMCAT_HOME=/home/michel/Desktop/saada/jakarta-tomcat-5.0.30
SAADA_GUI=$SAADA_HOME/java/guisaada
SAADA_DB_HOME=/home/michel/Desktop/saada/adass/saadadbs/ADASS_XV
SAADA_DB_NAME=ADASS_XV
```

Create SaadaDB

New SaadaDB Configuration

SaadaDB name:	ADASS_XV
DBMS	postgresql
DBMS database name:	ADASS_XV
DBMS user name:	michel
DBMS user passwd:	
DBMS server Name (or IP):	localhost
DBMS server port number:	
SaadaDB root dir :	/home/michel/Desktop/saada/adass/demo/saadadbs ...
SaadaDB Product Repository :	/home/michel/Desktop/saada/adass/demo/repository ...
Web Server Host Name:	http://localhost:8080/ADASS_XV
Coord. Equinox:	2000 ▼
Coord. System:	FK5 ▼

CREATE CLOSE

(2) run `$$SAADA_HOME/bin/NewDB`



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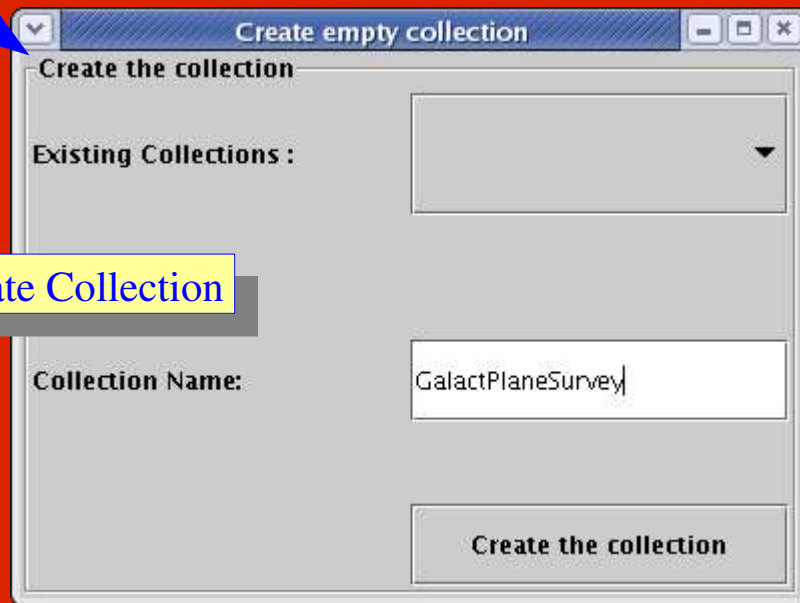
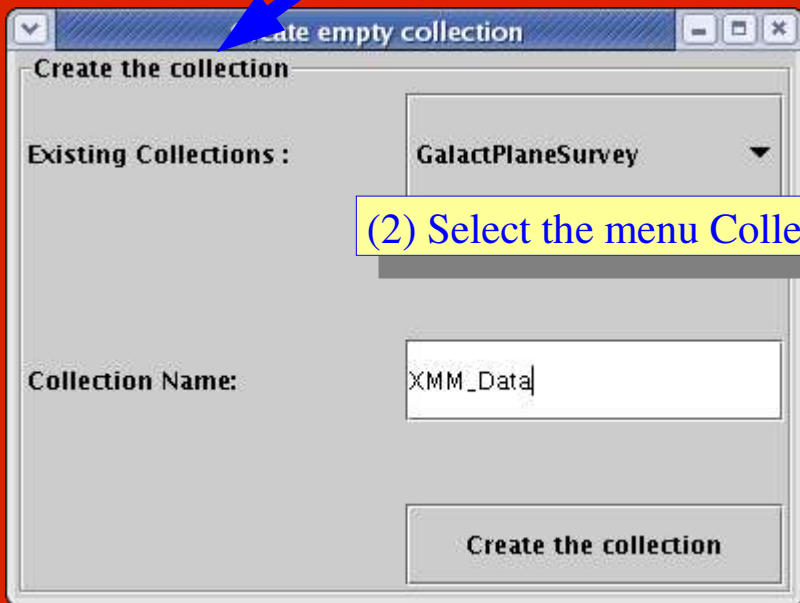


Demo 2: Create Collections

(1) run `$SAADA_DB_HOME/bin/guidb`



(2) Select the menu Collection > Create Collection





Data Into the VO with Saada

Demo 3: Load Data

(1) Create the product configuration

New Product Configuration

New Product Configuration EPIC_Image

Identification of the Files Matching the Product Configuration

By Directory By Filename Match (RegExp) By Keyword/Value

pattern regex .OIMAGE.

Class Mapping Strategy

One Class per Product File Automatic Classifier One Class for all Product Files

class name EPIC_Image

In Collection

Select a Collection XMM_Data

Mapping

Keywords Used as Instance Name (optional)	OBJECT
Ignored Keywords (optional)	CONTINUE, HISTORY, COMMENT
XMM_OBS_ID(optional)	XMM_OBJECT
XMM_OBJECT(optional)	XMM_OBS_ID
XMM_OBSERVER(optional)	XMM_OBSERVER

Save Configuration

Database ADASS_XV

System Collection Source Lists Image2D Spectra Relation Help

New Product Configuration

Load Product Files

Delete Product Class

(2) Load the products

Load Image2D products

Select a Product Configuration

Available Configurations:

EPIC_Image

Class_Mapping = EPIC_Image
Collection = XMM_Data
Identification product par = pattern

Select a Directory

/home/michel/Desktop/saada/adass/demo/data

Click to open ...

Select an Option

Accept Class Modifications while Data Loading

Do not Accept Class Modifications while Data Loading

Load



Data Into the VO with Saada

Demo 4: Create Relationships

```
ImgToSource.java (modified) - /home/michel/Desktop/s...
File Edit Search Preferences Shell Macro Windows
build.xml setenv.sh image2D.xml table_entry.xml collection...

//Build the query returning all records of the primary d
//
ResultSet obj_primary = db.runQuerySQL("select * from "
int i=0;
// compute correlation for all primary record
while (obj_primary.next()) {
//
```

(2) Write the correlator code in \$SAADA_DB_HOME/algo_correlation
edit relation_name.java
run ant

Database ADASS_XV

System Collection Source Lists Image2D Spectra Relation Help

Define Relation
Load Relation
Delete Relation

(3) Populate the Relationship

```
ResultSet obj_secondary = db.runQuerySQL(query);
int t = 0;

// Compute the real correlations for each secondary record possibly
while (obj_secondary.next()) {
long oid_secondary = obj_secondary.getLong("oid_saada");
double ra_secondary = obj_secondary.getDouble("pos_ra_csa");
double dec_secondary = obj_secondary.getDouble("pos_dec_csa");
String cols = " (oidprimary, oidsecondary, DEC, RA)";
db.runQueryUpdateSQL("insert into img2source " + cols
+ " values (" + oid_primary + ", " + oid_secon
+ " + dec_secondary + ", " + ra_secondary + ")")
```

Define Relation

Name

Primary Collection
XMM_Data IMAGE2D

Secondary Collection
XMM_Data ENTRY

Correlation Definition
Correlation Class...
Qualifier Name: double Add Qualifier

Create Relation

Load Relation

Select a Relation To Load

Select a Name Relation :

configuration infor

Name Relation = ImgToSource
Collection Primary:
Name= XMM_Data
DataType = IMAGE2D
Collection Secondary:
Name= XMM_Data
DataType = ENTRY
Java:
Name= ImgToSource

Load

(1) Create the Relationship



Data Into the VO with Saada

Demo 5: The web interface

(1) run \$SAADA_DB_HOME/bin/deployTomcat

The screenshot shows the ADASS_XV VO Portal in Mozilla Firefox. The main page has a yellow header with "ADASS_XV > VO Portal" and links for "Database Map" and "SaadaDB Home". Below the header, there are two query forms: "SIA Query" and "CS Queries (returns a VOTable)". Both forms have input fields for RA, DEC, and Radius (set to 0.7), and a "Submit" button. To the left, a sidebar lists three access modes: "Data Browsing Database content", "Data Selection Data can also be", and "VO Portal Access to both SIA". A "Query Editor for the SaadaDB ADASS_XV" window is open on the right, showing a query editor with a text area containing "Select SPECTRUM From * In GalactPlaneSurvey" and buttons for "New Query", "Restore Query", and "Submit Query".

(3) VO portal

(2) SaadaQL query editor



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Data Into the VO with Saada

Demo 6: Publish a « Registry »

http://localhost:8080 - Mozilla Firefox

Glu mark for Aladin

The following Glu mark enables Aladin to see your ADASS as a VO SIA provider

- 1- If the file AlaGlu.dic doesn't exist in the Aladin directory, extract it from Aladin.jar: `jar xvf Aladin.jar AlaGlu.dic`
- 2- Append the following text to AlaGlu.dic
- 3- Restarts Aladin: `java -jar Aladin.jar`

```

%ActionName      ADASS_XV-SIA
%Description     SIA access to the SaadaDB ADASS_XV
%Aladin.Label   Saada SIA: ADASS_XV
%Aladin.Menu     Saada SIA
%Aladin.LabelPlane ADASS_XV SIA
%DistribDomain   ALADIN
%Owner          CDS'aladin
%Url            http://localhost:8080/ADASS_XV
%Param.Description $1=Right Ascension
%Param.Description $2=Declination
%Param.DataType   $1=Target(RAD)
%Param.DataType   $2=Target(DEd)
%Param.Description $3=Size
%Param.DataType   $3=Field(RADIUSd)
%Param.Value      $3=0.7
%ResultDataType  Mime(sia/xml)

```

Done

ADASS_XV: Editor SaadaQL Query -- Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://localhost:8080/ADASS_XV

Red Hat News Demo SSC RH Support Demo XCTADB Demo ESO docs

Saada-DB : ADASS_XV > VO Portal

Database Map
SaadaDB Home

SIA Query (data and metadata are returned in VOTables)

Radius [] (Decimal Degree)

Collections [XMM_Data]

Include correlated data in results

Submit SIA Query

Done

(1) Query the Saada ressource description and put it in your registry



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ADASS_XV Detail Object -- Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://localhost:8080/ADASS_XV/detaille

Red Hat News Demo SSC RH Support Demo XCTADB Demo ESO docs Saada

Saada-DB : ADASS_XV > Detail

Database Map SaadaDB Home 

RA DEC(2000)	Product Download	Applet Viewer	Products of the Class	Collection Conte
23 09 41.74 +61 42 48.0	felhb_3_ext_cor.fits	Open SpecView	OHP Spectra	GalactPlaneSur

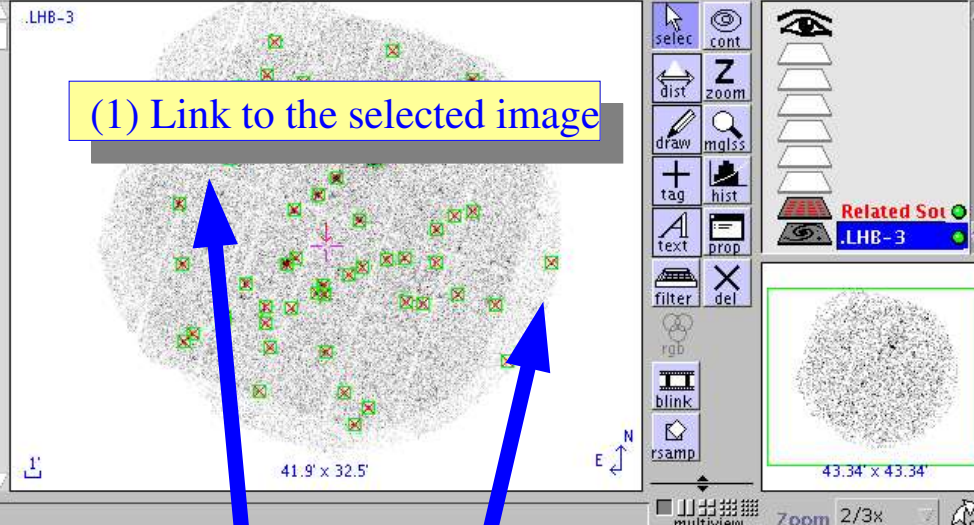
Fits keyword /type	value	SaadaQL Query keyword
name	felhb_3_ext_cor.fits	
AIRMAS		
BITPIX/int	-32	_BITPIX
BLAZE/String	4000 A	_BLAZE
BLOCKED/boolean	true	_BLOCKED
BUNIT/String		_BUNIT

Aladin v3.0 multiview WARNING: this is a beta release (v3.037_beta)

Load... Save... Tools... Print... Help... Quit

Position J2000 23:09:11.33 +61:43:25.5 Pixel full 0.0

LHB-3

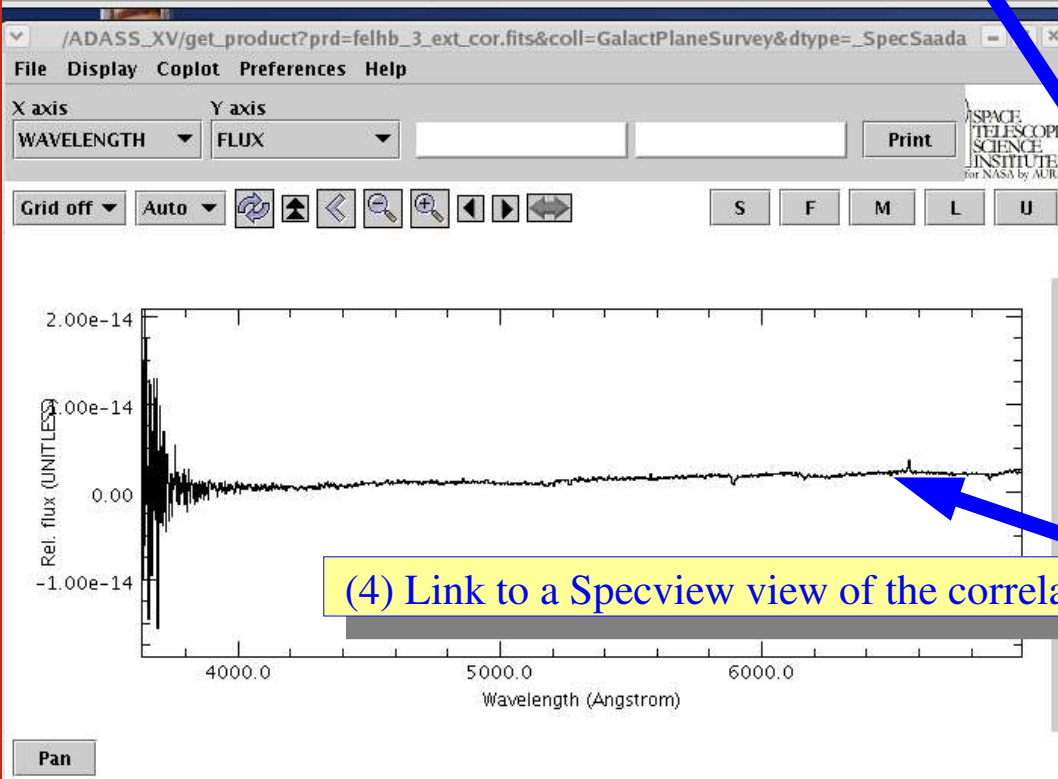


(1) Link to the selected image

(2) Link to the correlated sources with an anchor on Saada for each of them

64424509549	6	347.48	946604463	61.6
64424509548	5	347.33	508170589	61.6
64424509547	4	347.64	292531247	61.5
64424509546	3	347.38	359839492	61.7
64424509545	2	347.50	45309434	61.6

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Serv selector

Choose an image server or a data server and fill in the associated form drawn below

Image servers: Aladin, SSC, SkyView, SDSS, VLA..., MAST, Others..., Saada SIA, MyData

Data servers: VizieR, Catalogs Surveys in VizieR, Missions in VizieR, Simbad, NED, Others.., SDSS, Saada CS, SkyBot, FoV

IA access to the SaadaDB ADASS

Target: HD 21872

Size: 0.7

- LHB-3
 - ImgToSource
 - Related Sources
 - ImgToSpectra
 - felhb_3_ext_cor.bdf (Spectrum viewer)
 - felhb_3_ext_cor.bdf (Saada page)
 - felhb_1_ext_cor.bdf (Spectrum viewer)
 - felhb_1_ext_cor.bdf (Saada page)

* SUBMIT * History Reset Clear Close