Scientific Council 2013
VizieR

Summary

1) Contents and usage (Pierre Ocvirk)

2) Work accomplished since the last scientific council (Gilles Landais)

3) The VizieR Photometry tool (Thomas Boch)

VizieR

Vizier is the service which gives a unified access to a very large collection of astronomical catalogues & associated data:

➜ Reference catalogues & surveys of astronomical sources in all wavelengths (e.g. SDSS, 2MASS, UCAC, WISE)

➜ Tables from papers published in the major astronomical journals

➜ A large variety of astronomical data: astronomical sources , spectra, polarization data, but also models (evolutionary, populations, synthetic spectra, …), statistical analyses, compilations, …

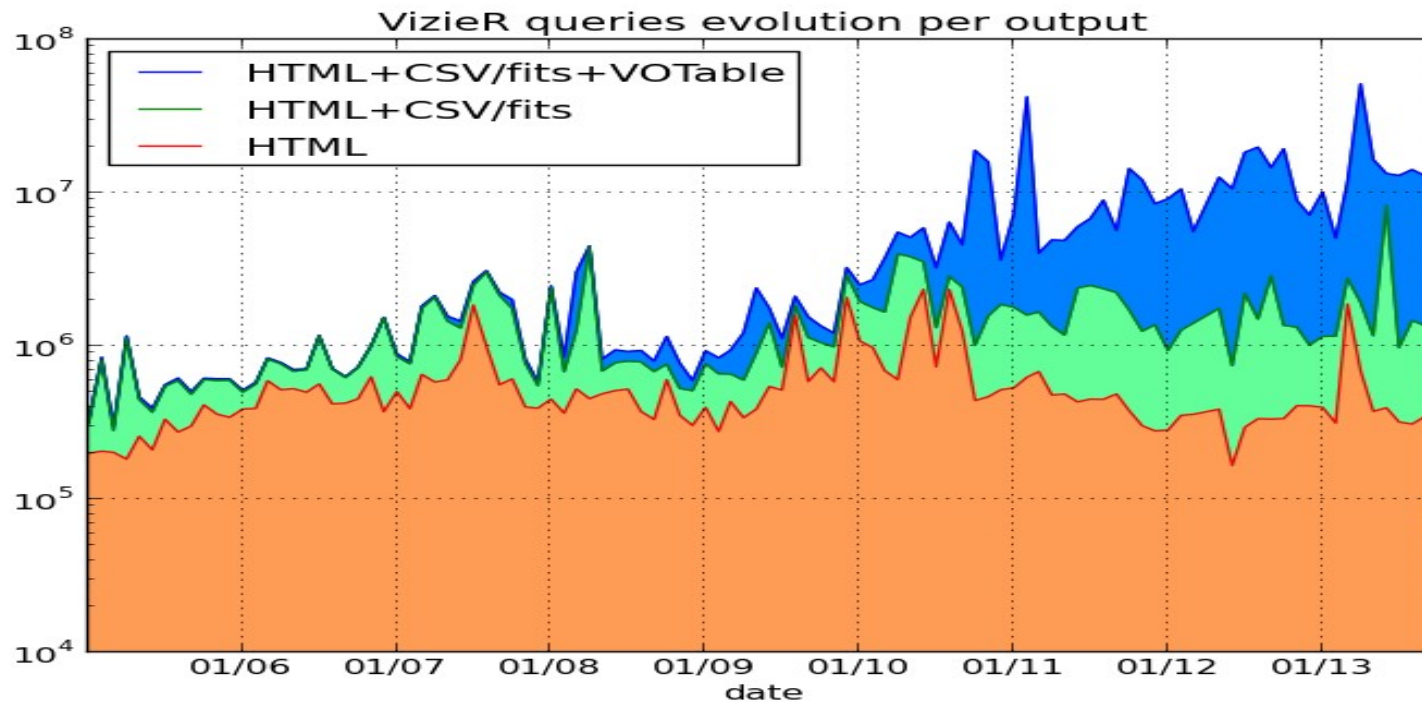… but with homogenized descriptions (metadata)

Current data contents

→ VizieR contains 11,573 catalogues

→ The biggest catalogue : GAIA Gums 2,143,475,885 records

	2012	2013
Catalogs	10,357	11,573
Tables	22,285	24,928
Columns	317,202	361,614
Rows with positions(without GAIA Gums and obsoletes)	9.25 G	9.37 G
[obsolete]	+2.05G	+2.5G
GAIA Gums	+2.1G	+2.1G
Rows with positions	13.4	14.1G

VizieR statistics

➜ Queries number average per day : ~500,000

VizieR queries evolution per output

VizieR ingestion statistics

➔ Number of catalogues ingested since the last scientific council : ~1100 (~3 per day)

➔ 5 new large catalogues ingested since 01/01/2013:

January :

    SPM4 (~987,000 queries)

    OGLE BULGE (~82,000 queries)
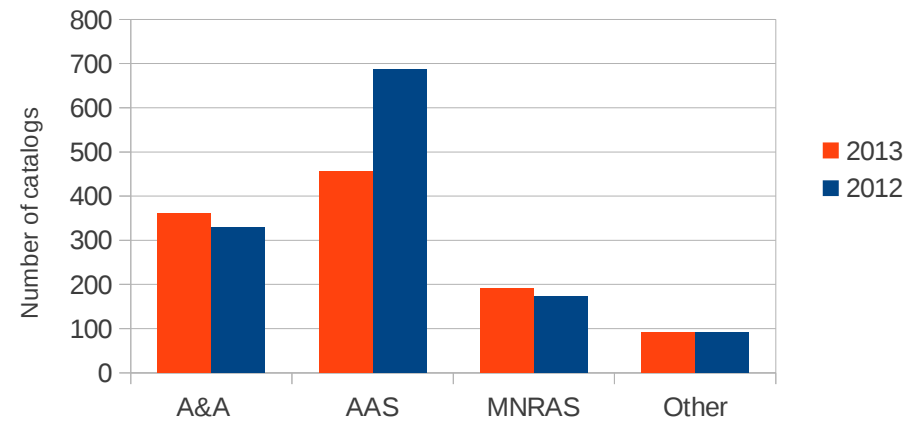
    SAGE-Archive (~46,000 queries)
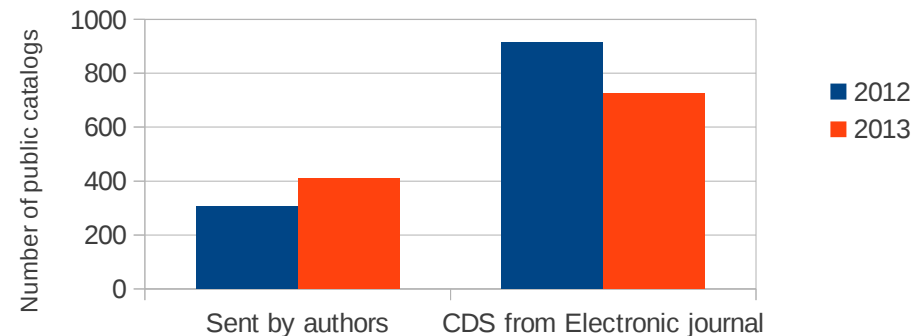
March :

    SDSS DR9 (~1,208,000 queries)

May :

    UKIDSS(LAS, GCS, DXS) DR9 (~134,000 queries)

Ingestion of catalogs

(01/11/2012 to 31/10/2013)

Pipeline origin

(01/11/2012 to 31/10/2013)

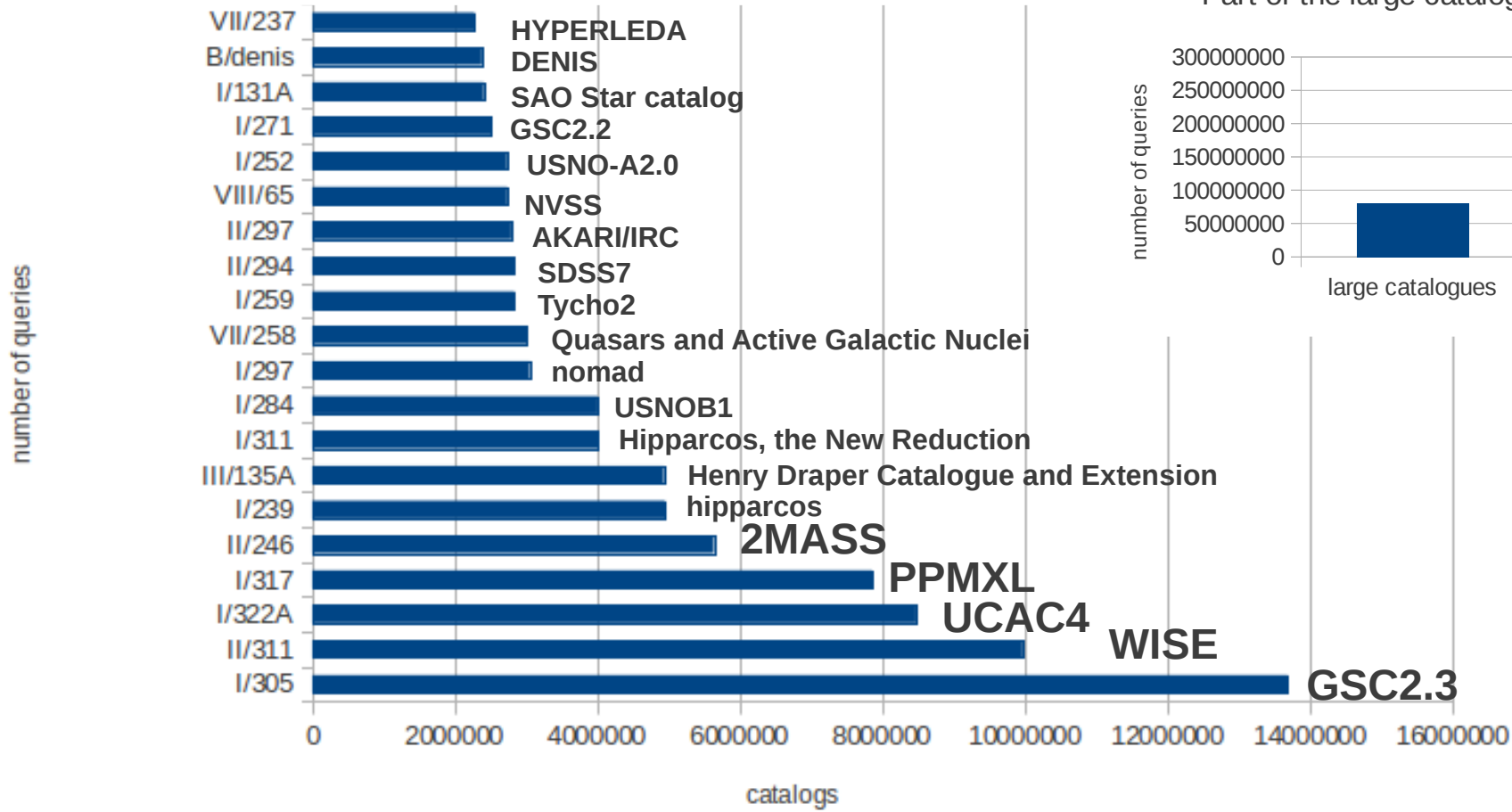# Query repartition (Jan 2013 – Oct 2013)
(coming from the VizieR web pages)

238.4k visits

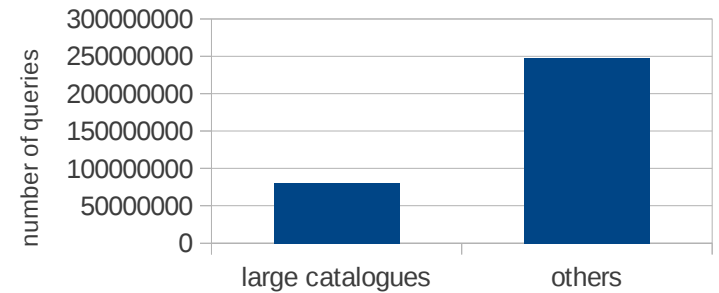|	
Europe	123,839
North America	59,783
Asia	29,364
South America	14,685
Oceania	7,541
Africa	2,523
Central America	292

1
7.0k
22.1k
51.4k

The VizieR catalogues popularity

The VizieR TOP 20 of catalogs (in 2013)

Part of the large catalogs (in 2013)

Work accomplished in 2013

➤ **TAPVizieR** is available @ http://tapvizier.u-strasbg.fr/adql/

  (poster @ADASS 2012 and talk in the Interop meeting)

  ➤ Allows SQL-like queries

  ➤ A dedicated database synchronized from the VizieR database

  ➤ A simple user interface

➤ **Photometry** : Photometry computed among 2241 catalogues

  ➤ Adjustments in the pipeline to detect the filters used according to the columns name, UCD, etc.

  ➤ Photometry plotter (Thomas & Anne-Camille)

➤ A new mirror in South Africa (**SAAO**) is being implemented (collab. S. Barway SAA0)

➤ And other minor updates and maintenance actions ..

Work accomplished in 2013

Technicals improvements :

➤ Working with 64-bits integer to store identifiers or flags from large catalogues

➤ The VizieR main site in CDS uses a PosgreSQL database instead of Sybase

➤ Improve the service quality

  ➤ with logging (log the database updates)

  ➤ Improve the supervision (nagios)

Associated data in VizieR
(inventory)

Search for associated data in VizieR :

➜ Different kinds of non-tabular data available in the catalogue, frequently illustrated with plots

➜ Also: photometric data which can be included in Vizier Photometric viewer

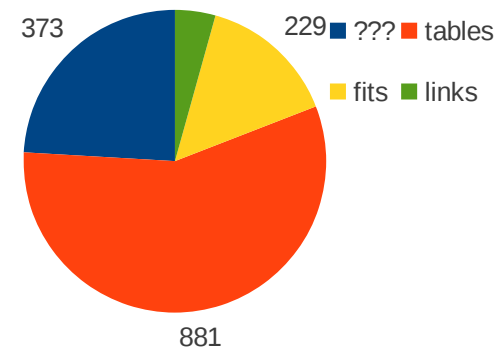| Additional data type	
time series	1067
spectra	365
images	115
cube	42
SED	*2215*

Associated data in VizieR
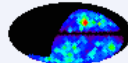## (inventory)

Origin/nature of the associated data:

➜ The « **added files** » are data files which come from the articles . In FITS or ASCII format, these can be dowloaded via FTP or by clicking on links in the VizieR web pages.

Volumetry : ~750,000 FITS files splitted in ~400 catalogues

- ➜ CoRoT ~ 300,000 time series
- ➜ Grids of ATLAS9 Model Atmospheres and MOOG spectra ~ 300,000 spectra
- ➜ Galaxy And Mass Assembly (GAMA) ~60,000 spectra

➜ The Resources computed from the **tabular data** themself

➜ **Links** to external resources

Origin of the associated data types

VII/259/spectra	6dF galaxy survey final redshift release (Jones+, 2009)	ReadMe+ftp
Post annotation	Table of spectral observations (136304 rows)	2009MNRAS.399..683J

Full	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	SpecID	6dFGS	dr arcsec	z	Rcor	MJD.V d	MJD.R d	Sp	FITS	RAJ2000 "h:m:s"
1	00 00 53.07	-30 07 14.0	1	g0000531-300714	0.001	0.03981	3.92	52846.78	52846.82	Sp	FITS	00 00 53.07
2	00 01 03.23	-29 18 29.1	2	g0001032-291829	0.001	2.28448	8.89	52846.78	52846.82	Sp	FITS	00 01 03.23
3	23 59 14.98	-30 06 36.2	3	g2359150-300636	0.001	2.28377	5.30	52846.78	528			
4	23 58 17.26	-30 06 41.2	4	g2358173-300641	0.001	0.02967	9.21	52846.78	528			

www-wfau.roe.ac.uk/data/6dFGS/dr3_fits/fits/00/g0000531-300714.fits

67

373 · 229 ■ ??? ■ tables

■ fits ■ links

881

Ongoing actions

1) Improve the ingestion pipeline for the plots

2) Index the Additional files coming from publications or surveys :

   spectra, time-series, images (..)

   ➔ Choose the technology (test SAADA in the VizieR context)

   ➔ Update the ingestion pipeline

   ➔ VO output : SIA (image protocole), SSA (spectra protocol), (time-serie protocol)..

   ➔ Brainstorming including astronomers & developpers

   ➔ Planned meeting at the AAS with the ADS journals and other actors

Future developments to consider

➔ Add Aladin Lite in the VizieR result page

➔ Improve the position search speed by using a new VizieR index

➔ Add the "Upload your own table" in TAPVizieR (to allow users to perform SQL queries on their tables as well as on VizieR ones)