OV à l'OCA

MP3C – ClusterCat – FMNEAR

ASOV 2013 – Jerome Gerakis

Contexte

- OV à l'OCA : un développement récent (2011)
- Un réel potentiel (archives, méthodes...) mais inexploité
- Démarrage effectif début 2012 avec le projet MP3C (Minor Planet Physical Properties Catalog)
- D'autres projets qui suivent : FMNEAR, ClusterCat

MP3C

Marco Delbo – Paolo Tanga

- Etude des petits corps du système solaire par leurs propriétés physiques : dimensions, paramètres orbitaux, compositions...

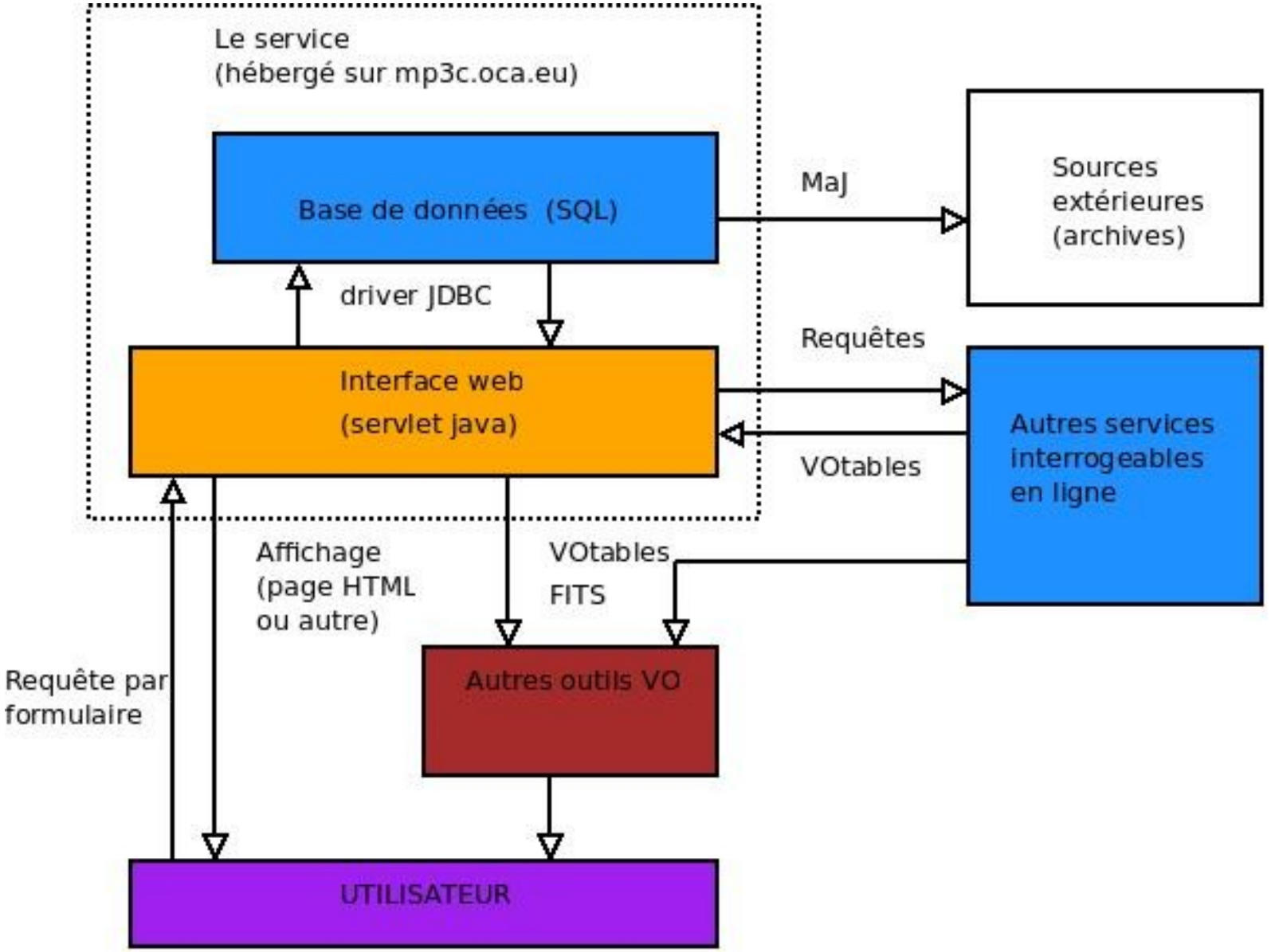
- Problèmes :
  - Dispersion des données
  - Différences de format
  - Recoupement et comparaison difficile
  - Pas de précédent

- => Proposer une solution unifiée

MP3C

- Récupère, centralise et recoupe des archives de données d'origines diverses (Planetary Data System, WISE...)
- Recherche par critères, filtres de résultats selon le type de donnée cherchée
- Ré-injection directe des votables résultats dans des outils de visualisation (Topcat, etc...) via SAMP
- Communication avec d'autres services pour informations additionnelles ou post-traitement (e.g : Miriade)

MP3C


Le service
(hébergé sur mp3c.oca.eu)
Base de données (SQL)
driver JDBC
Interface web
(servlet java)
MaJ
Sources
extérieures
(archives)
Requêtes
VOtables
Autres services
interrogeables
en ligne
Affichage
(page HTML
ou autre)
VOtables
FITS
Autres outils VO
Requête par
formulaire
UTILISATEUR

MP3C

Search by Identification

- (•) **Designation Number**
  Standard, long, or packed (e.g : 105333, D9837, J99D08B...)
- ( ) **Full Name**
  Common name or temporary (e.g : "Pallas", "1995 SY25")

search

Search by Physical Parameters

Absolute Magnitude H	**min :**	**max :**
Phase Parameter G	**min :**	**max :**
Albedo pV*(WISE)*	**min :**	**max :**
Diameter (km)*(WISE)*	**min :**	**max :**
Spectral Slope	**min :**	**max :**
Spectral Color (I-Z)	**min :**	**max :**
Rotation Period (hour)	**min :**	**max :**
Classification	(•) Tholen	( ) SMASS II

Search by Orbital Parameters

Inclination	**min :**	**max :**
Orbital Eccentricity	**min :**	**max :**
Semimajor Axis (AU)	**min :**	**max :**

Search by Proper Elements

Method	(•) Analytic	( ) Synthetic
Proper Inclination	**min :**	**max :**
Proper Eccentricity	**min :**	**max :**
Proper Semimajor Axis	**min :**	**max :**
Family	44	

Search Satellites

Diameter of the Primary (km)	**min :**	**max :**
Diameter of the Satellite (km)	**min :**	**max :**
Size Ratio	**min :**	**max :**
Binary Semimajor Axis (AU)	**min :**	**max :**

search Effacer

Result Display Options

MPC data
- [x] Full Name
- [ ] Photometric Parameters
- [x] Orbital Elements
- [ ] R.M.S residual
- [ ] Other details

WISE data
- [x] Size
- [ ] Albedo
- [ ] Wx

SDSS data
- [ ] Color
- [ ] Classification

PDS data
- [ ] Rotation and Light Curve
- [ ] Proper elements
- [ ] Families

Other data (albedo and diameter)
- [ ] AKARI
- [ ] IRAS
- [ ] MSX

Empty lines
- [ ] Don't show result with incomplete data

Satellite data
- [x] Diameters
- [ ] Orbital Elements

Occultation data
- [ ] Event data
- [ ] Derived Astrometry

Results

(take a look at the fields description)

14915 line(s) returned New Search

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Prev. Next

Designation	Name	Epoch	Anomaly	Perihelion	Node	Inclination	Eccentricity	Daily Motion	Semimajor Axis	Unc.	WISE Diameter	D error
00044	(44) Nysa	K123E	123.25315	343.46996	131.56545	3.70558	0.1480066	0.26118641	2.423831	0	-	-
00135	(135) Hertha	K123E	20.64126	340.19824	343.82518	2.30429	0.2056005	0.26040777	2.4286602	0	77.0000	7.8330
00142	(142) Polana	K123E	82.07249	291.61376	291.32025	2.2377	0.1362199	0.2622291	2.4174016	0	56.5590	1.3960
00650	(650) Amalasuntha	K123E	35.48808	178.3454	215.59369	2.55791	0.1844285	0.25573867	2.4581315	0	18.6090	0.1730
00878	(878) Mildred	K123E	124.6843	189.75649	172.87558	2.0611	0.2263045	0.27183161	2.3601308	0	2.5290	0.3810
01183	(1183) Jutta	K123E	68.19698	205.24159	15.2444	2.80276	0.1314296	0.26799973	2.3825744	0	25.1650	0.0740
01378	(1378) Leonce	K123E	219.56538	202.50921	43.59367	3.59114	0.149796	0.26937646	2.3744496	0	22.4560	0.1700
01493	(1493) Sigrid	K123E	158.03514	1.22726	330.67596	2.58445	0.2027342	0.2604584	2.4283454	0	22.1110	0.2000
01511	(1511) Dalera	K123E	50.70828	97.76995	81.75986	4.07028	0.108904	0.27222427	2.3578607	0	-	-
01740	(1740) Paavo Nurmi	K123E	254.81423	78.79303	296.1451	1.99967	0.1897286	0.25427518	2.4675544	0	12.7620	0.1500
01768	(1768) Appenzella	K123E	21.97778	19.51013	12.45273	3.26226	0.1799881	0.2569241	2.4505646	0	20.2210	0.1290
01896	(1896) Beer	K123E	50.00049	180.04916	182.17729	2.22061	0.2220342	0.27048439	2.3679612	0	4.7280	0.8160
01932	(1932) Jansky	K123E	301.00122	303.37449	189.01972	1.88958	0.1588815	0.26968424	2.3726427	0	5.4140	0.4130
02007	(2007) McCuskey	K123E	232.05345	185.11938	17.09162	3.0434	0.1143069	0.26751427	2.385456	0	25.7330	0.0890
02066	(2066) Palala	K123E	22.21919	109.59574	117.23189	3.75313	0.1292159	0.26614244	2.3936462	0	-	-
02081	(2081) Sazava	K123E	27.40526	222.99685	66.41801	3.9096	0.161135	0.2568292	2.4511682	0	16.6690	0.1040
02139	(2139) Makharadze	K123E	265.47414	66.51825	256.42665	2.18374	0.1874714	0.25514234	2.4619602	0	17.1900	0.2640
02170	(2170) Byelorussia	K123E	296.15392	116.56091	255.90948	2.07951	0.1817793	0.26435995	2.4043938	0	9.4270	0.1170
02210	(2210) Lois	K123E	303.61233	215.81785	123.562	2.92918	0.2272722	0.26438533	2.40424	1	4.4820	0.1600
02279	(2279) Barto	K123E	128.77387	61.85209	140.03415	2.98189	0.15875	0.2558555	2.4573831	0	14.8410	0.0520
02313	(2313) Aruna	K123E	92.3978	108.39915	229.75378	1.83563	0.1905062	0.25595498	2.4567464	0	15.0560	0.1140
02409	(2409) Chapman	K123E	201.33821	207.73183	140.78149	3.51007	0.1906111	0.2888901	2.2662837	0	-	-
02441	(2441) Hibbs	K123E	220.93545	216.63161	140.15836	3.73925	0.1918349	0.26345005	2.4099269	0	-	-
02462	(2462) Nehalennia	K123E	129.70244	53.73725	99.79494	2.98628	0.142235	0.26375276	2.4080825	0	4.6620	0.2040
02487	(2487) Juhani	K123E	73.66654	37.18194	347.52686	2.81226	0.1837994	0.26569769	2.3963166	0	12.5520	3.1610
02509	(2509) Chukotka	K123E	341.57014	348.50755	343.74991	2.8492	0.1923306	0.25607799	2.4559596	1	16.7840	0.0900
02565	(2565) Grogler	K123E	185.16621	36.02408	344.04941	2.03391	0.234295	0.27231218	2.3573533	0	-	-
02607	(2607) Yakutia	K123E	147.60614	336.19295	359.77686	2.09582	0.2282005	0.26920452	2.3754605	0	4.6950	0.0810

MP3C

VO interoperability

Export your result

(•) General result ( ) Satellites only ( ) Occultations only ( ) General + satellites ( ) General + occultations
(•) ASCII File ( ) CVS File ( ) VOTable
[export this result]

Send your result to other VO softwares

Click 'register' to search and connect to an active VO hub (on your local machine)

[Register] [Unregister] **Registered:** No

Registered Clients

IMCCE Miriade

Check targets with the Miriade tool

( ) All (•) Selected
(•) Ephemeris ( ) Visibility
Epoch [now] How many dates? [1] How many cuts? [1]
Increment [1d] Location [020] (IAU location codes)
(the following options matters only for ephemeris computation)
Type of coordinates : (•) Spherical ( ) Rectangular ( ) Local ( ) Hour Angle ( ) Dedicated to observation ( ) Dedicated to AO
Type of ephemeris : (•) Astrometric J2000 ( ) Apparent of date ( ) Mean of date ( ) Mean J2000
Reference plane : (•) Equator ( ) Ecliptic
Ephemeris time scale : (•) UTC ( ) TT
Planetary theory : (•) INPOP ( ) DE405
[Compute]

MP3C

- http://mp3c.oca.eu

MP³C : Minor Planet Physical Properties Catalogue

export this result

ASCII File
CVS File
VOTable

VO options

14915 line(s) returned

Designation	Name
00044	(44) Nysa
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00142	(142) Polana
00650	(650) Amalasuntha
00878	(878) Mildred
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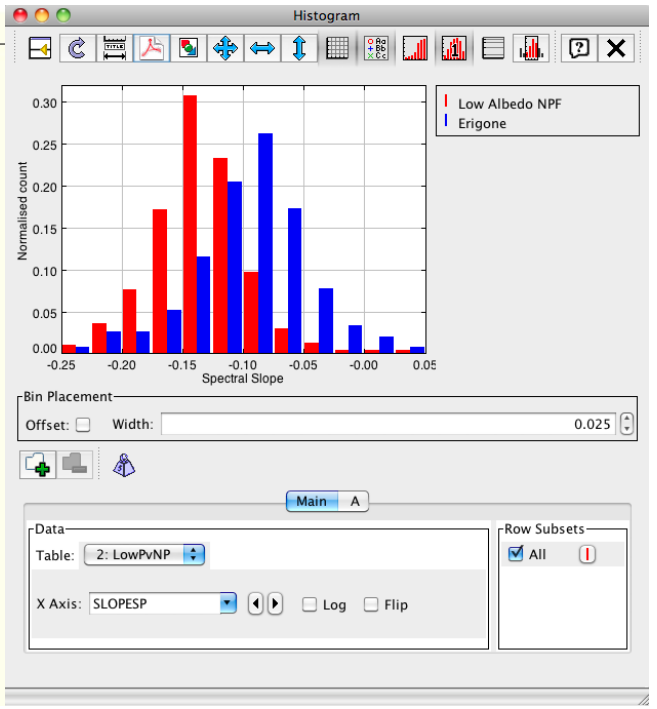
01768	(1768) Appenzella
01896	(1896) Beer
01932	(1932) Jansky
02007	(2007) McCuskey
02066	(2066) Palala
02081	(2081) Sazava
02139	(2139) Makharadze
02170	(2170) Byelorussia
02210	(2210) Lois
02279	(2279) Barto
02313	(2313) Aruna
02409	(2409) Chapman
02441	(2441) Hibbs



MP3C

- Un total de 581 793 objets reconnus, incluant des informations sur les binaires et les evènements d'occultation
- Améliorer le temps de réponse sur les grosses requêtes (~ 10s)
- Améliorer l'érgonomie générale
- Connecter avec plus d'outils et de services
- Proposer un webservice documenté et conforme

ClusterCat

Eric Slezak – Christophe Benoist

- Le projet « frère » en développement : une base de donnée des clusters de galaxies
- Exploite beaucoup de sources images (CADC, XMM) et de références croisées avec d'autres catalogues (VIMOS)
- S'appuie sur Aladin pour l'assemblage d'images multi-spectrales

ClusterCat

Cluster database service (alpha)

Cluster Members

Cluster information

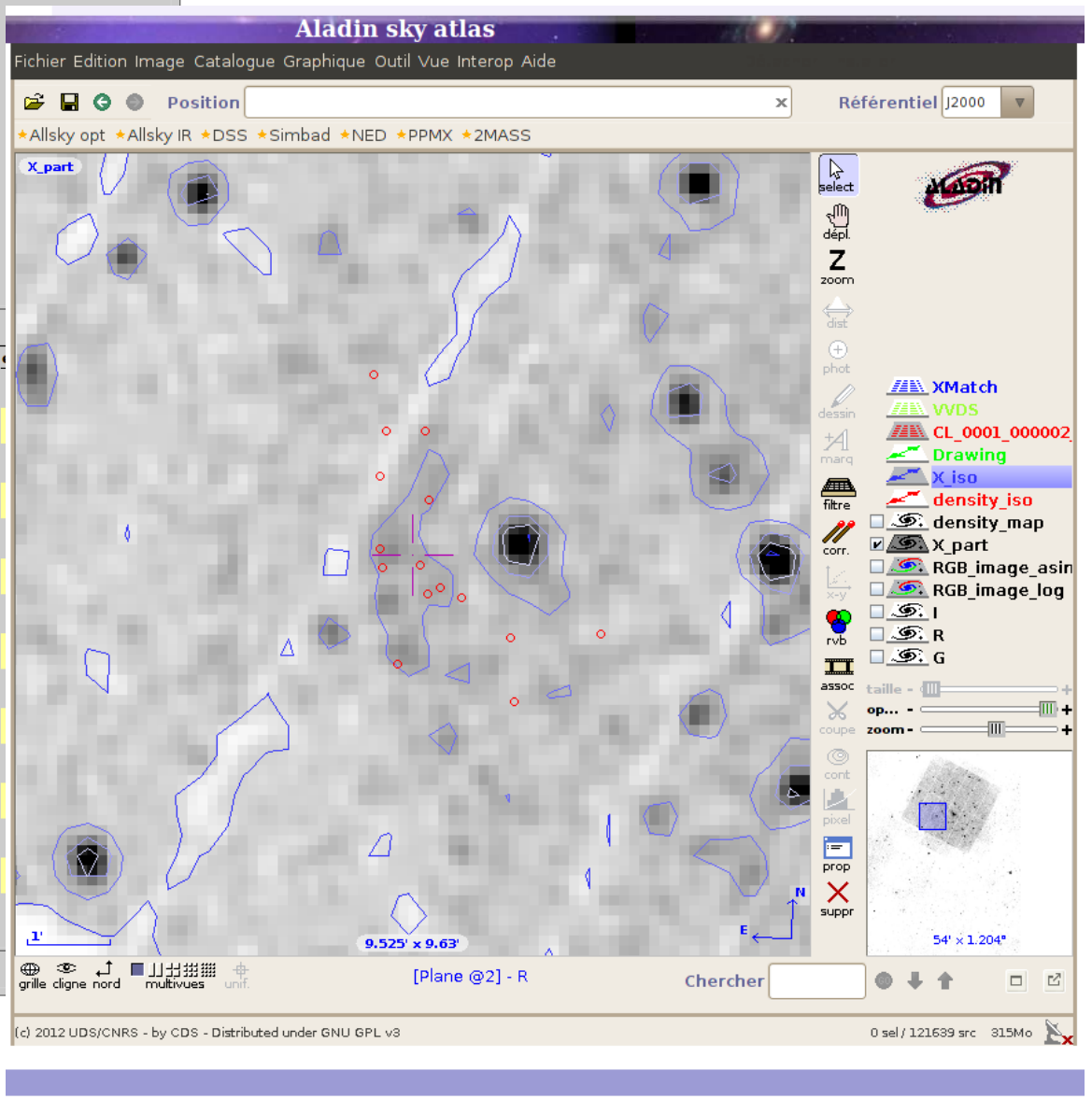
Name	CL_0001_000002_01_n01_p01
Right Ascension	36.1397007
Declination	-4.2368342
Redshift	0.3024
Diameter (arcsec)	0.862
Standard Deviation Z photo	0.0565
Lambda Richness	10

List of Galaxies

Id Galaxy	RA	Dec	Z photo	Mag U	Mag G	Mag R	Mag I	Mag Z	err U	err G
1827385	36.1428413	-4.2585640	0.2960	20.21	19.03	18.26	17.83	17.49	0.00	0.00
1830282	36.1196136	-4.2661948	0.3160	22.21	20.73	19.61	19.03	18.65	0.01	0.00
1834504	36.1202812	-4.2533169	0.2900	20.66	19.85	19.31	19.03	18.75	0.00	0.00
1835798	36.1021194	-4.2524972	0.3160	20.46	19.55	18.87	18.51	18.26	0.00	0.00
1836259	36.1458282	-4.2393489	0.3080	21.24	19.64	18.47	17.89	17.53	0.01	0.00
1836653	36.1343193	-4.2433972	0.3050	22.38	20.55	19.34	18.79	18.49	0.02	0.00
1836654	36.1384468	-4.2387128	0.2910	21.21	19.33	18.12	17.60	17.35	0.01	0.00
1836833	36.1369133	-4.2445412	0.3010	21.29	19.52	18.31	17.77	17.46	0.01	0.00
1838746	36.1301346	-4.2453980	0.2990	22.29	20.46	19.26	18.71	18.43	0.02	0.00
1842787	36.1462555	-4.2355952	0.3120	22.52	20.85	19.70	19.08	18.73	0.02	0.00
1845875	36.1366463	-4.2257662	0.3180	21.67	19.96	18.75	18.18	17.85	0.01	0.00
1848800	36.1464500	-4.2209702	0.2960	22.66	20.88	19.66	19.14	18.85	0.01	0.00
1852665	36.1374016	-4.2120199	0.2980	22.67	20.93	19.71	19.18	18.88	0.01	0.00
1853384	36.1451950	-4.2119951	0.2890	22.21	20.47	19.28	18.76	18.47	0.01	0.00
1858424	36.1476173	-4.2009311	0.3390	21.97	20.82	19.95	19.46	19.09	0.01	0.00

Send list to Aladin Applet

VO options

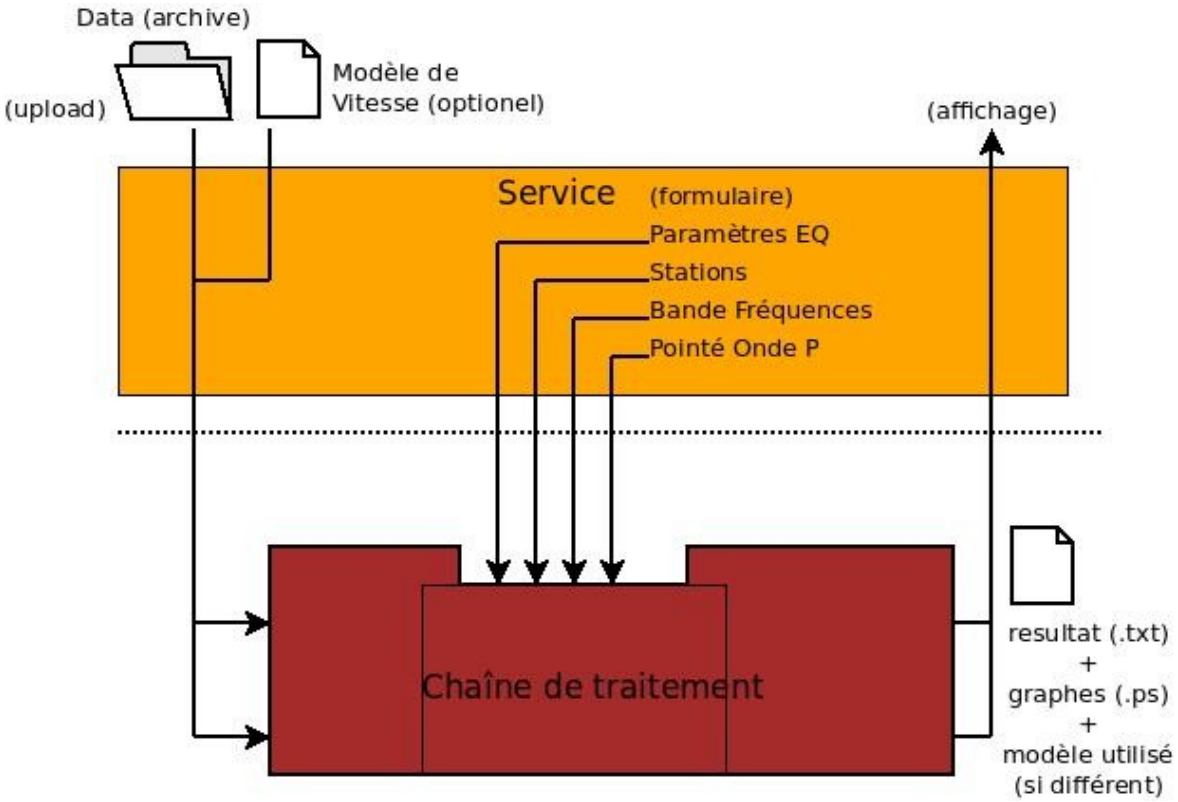


FMNEAR

Bertrand Delouis – Anne Deschamp

- Calcul d'inversion de mécanique focale à paramètres multiples
- Etendre les concepts OV à la géophysique

FMNEAR


Data (archive)
(upload)
Modèle de
Vitesse (optionel)
(affichage)
Service
(formulaire)
Paramètres EQ
Stations
Bande Fréquences
Pointé Onde P
Chaîne de traitement
resultat (.txt)
+
graphes (.ps)
+
modèle utilisé
(si différent)

FMNEAR

FMNEAR computation service

EQ Parameters

Date: 2012 ▼ January ▼ 11 08 h: 30 m: 22 s UTC

Latitude: 41.522

Longitude: 5.920

Depth (km): 21

Magnitude: 3.1

Velocity Model

Layer	Thickness (km)	S Wave	P Wave	Density
Upper Mantle	670	3.0	5.5	0
Lower Mantle	2230	5.0	7.5	0
Outer Core	2246	7.0	9.5	0
Inner Core	1225	9.0	11.5	0

Load Default

Frequencies

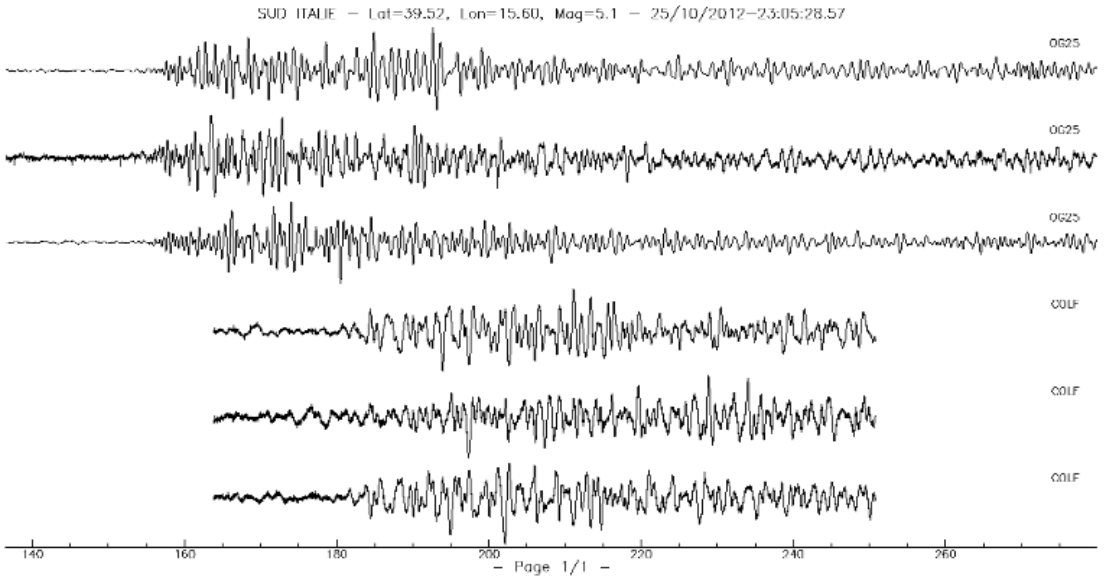
Optimal ▼

Stations selection

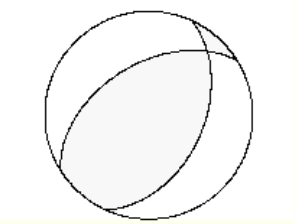
Name	Latitude	Longitude	Distance	Azimuth	P wave pick time	
LPEF	43.523	5.702	345	89	1.2 s	☑
GANF	43.998	5.909	650	145	1.0 s	☐
FILF	42.560	2.417	850	45	0.8 s	☑
AJAC	41.927	8.763	27	24	0.2 s	☑

FMNEAR

FMNEAR computation service



Strike	24.4
Dip	46
Rake	65
RMS	1.2
Depth	20.5
Confidence index	4
Composants	3
Magnitude Mw	3.0



Download result archive
See QuakeML file

New computation

Conclusion

- Un décollage réussi
- Besoin de plus de communication
- Besoin de retours utilisateurs