VAMDC

Asynchronous requests with PDL in VAMDC Portal

http://portal.vamdc.eu/

N.Moreau, C.M. Zwölf

Paris Observatory, LERMA2, VO-PDC

The VAMDC Consortium

- A consortium of Institutes and Research Institutions that share a common technical and political framework for the distribution and curation of atomic and molecular data

- 15 full members

- Distribution, curation, access to atomic and molecular data

- Provides tools to look for and manipulates data

The VAMDC Portal

- Main access point to look for data in VAMDC
- http://portal.vamdc.eu
- Queries VAMDC registry to get active databases
- 29 databases
- Uses VAMDC-TAP for requests
- Results are obtained in XSAMS format (xml schema to describe atomic and molecular data)
- XSAMS files can be transformed to simplify data access

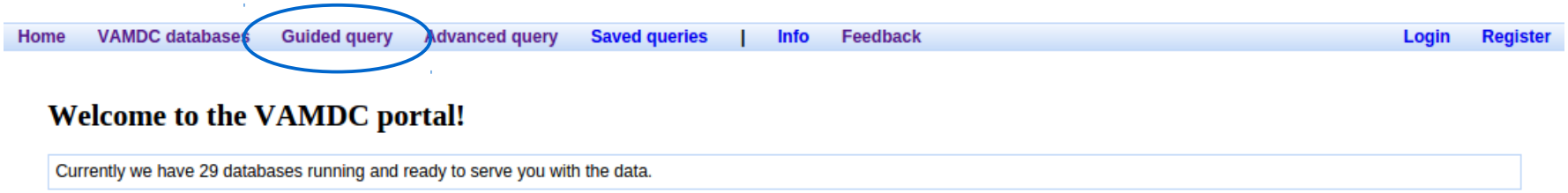
Homepage


Home
VAMDC databases
Guided query
Advanced query
Saved queries
|
Info
Feedback
Login
Register
Welcome to the VAMDC portal!
Currently we have 29 databases running and ready to serve you with the data.

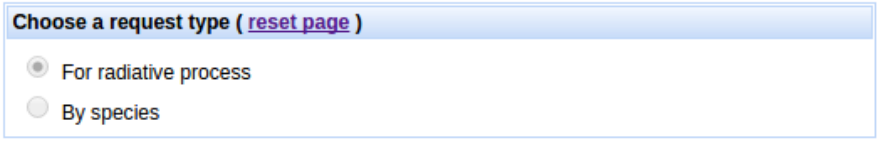
Looking for data : Guided query

Portal provides two search modes :

1. Guided search



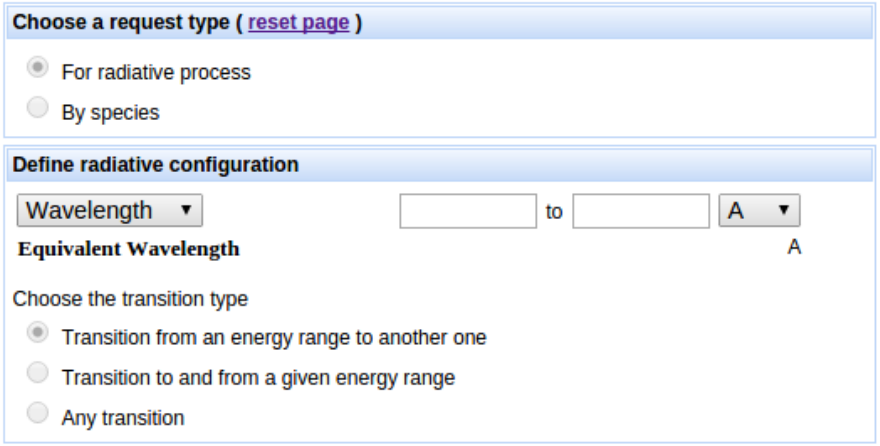
Looking for data : Guided query



Build a request
step by step

Looking for data : Guided query

Build a request step by step



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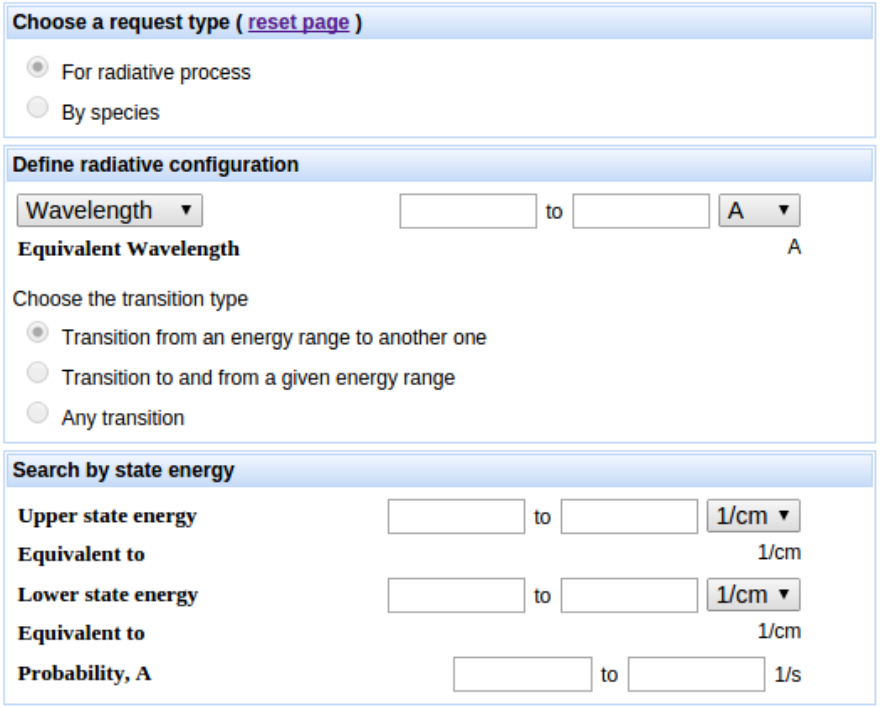

Looking for data : Guided query

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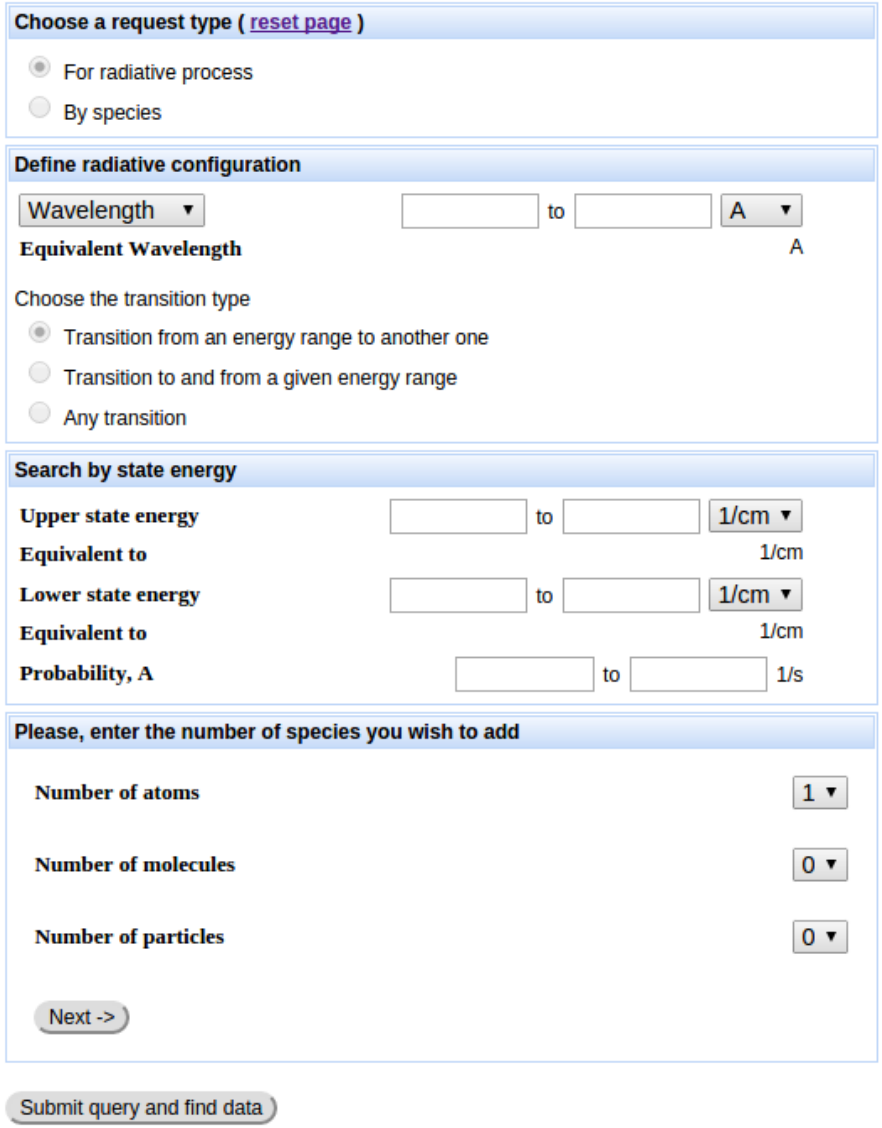
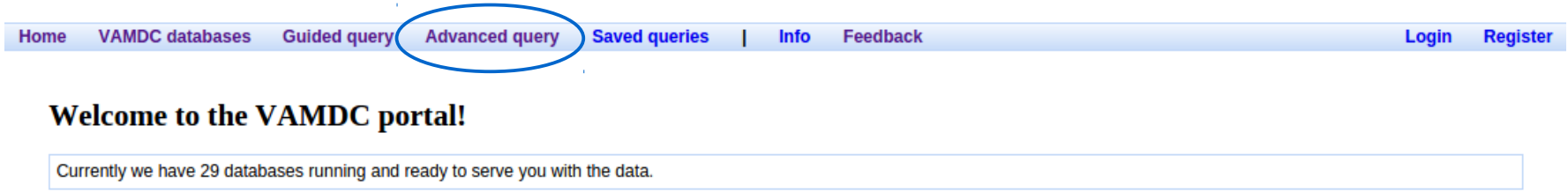


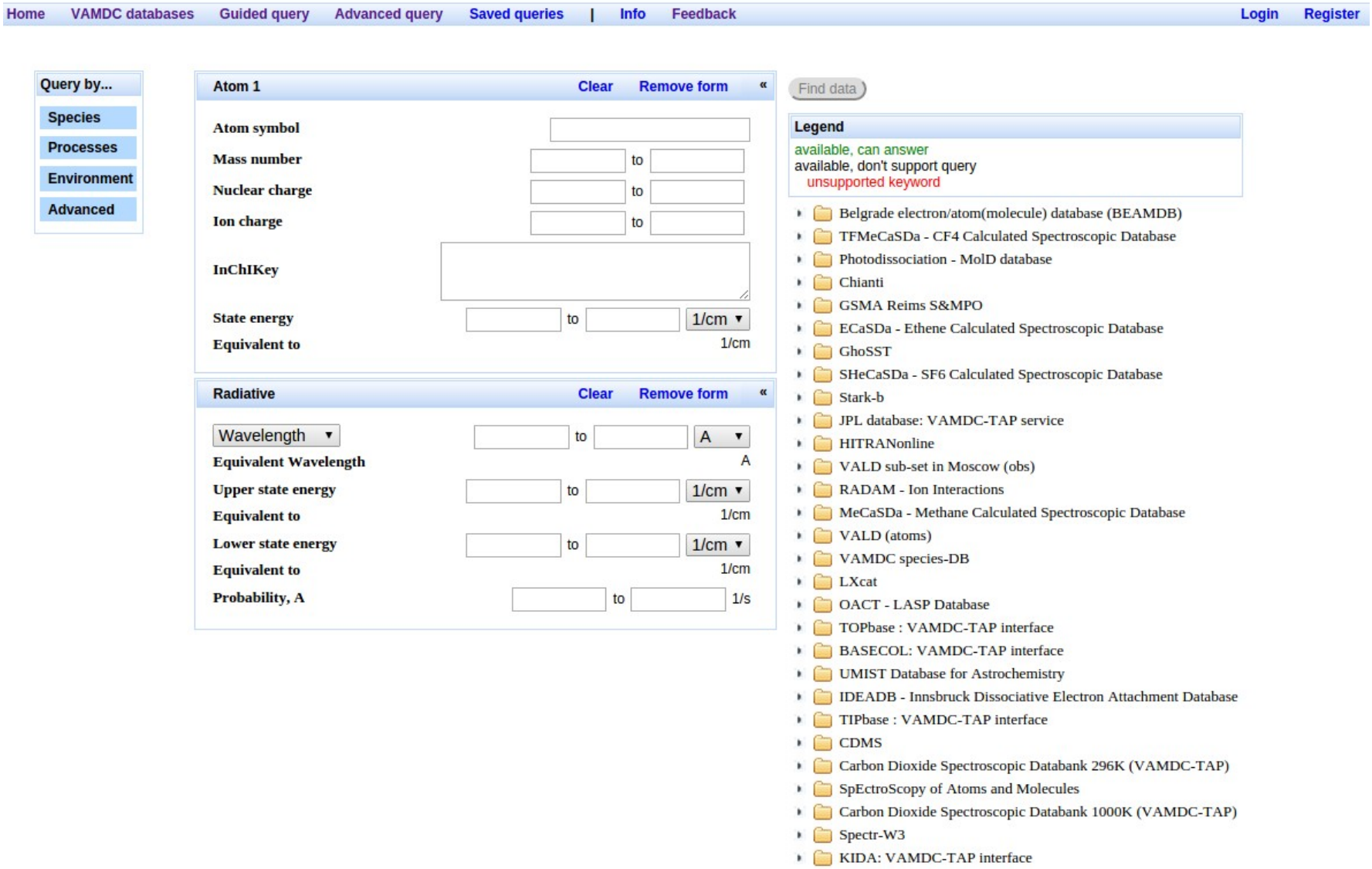
Looking for data : Advanced query

Portal provides two search modes :

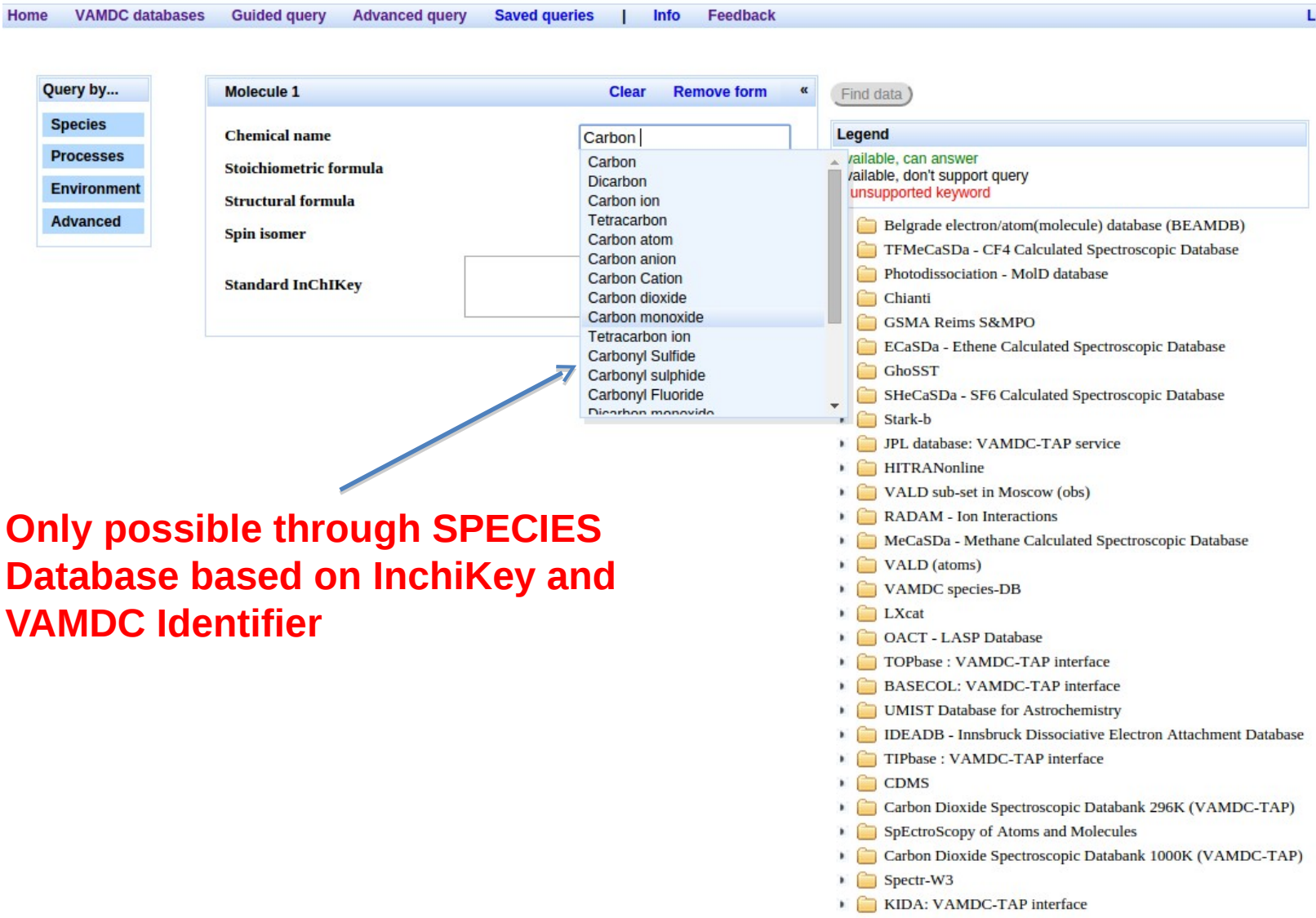
2. Advanced search



Looking for data : Advanced query



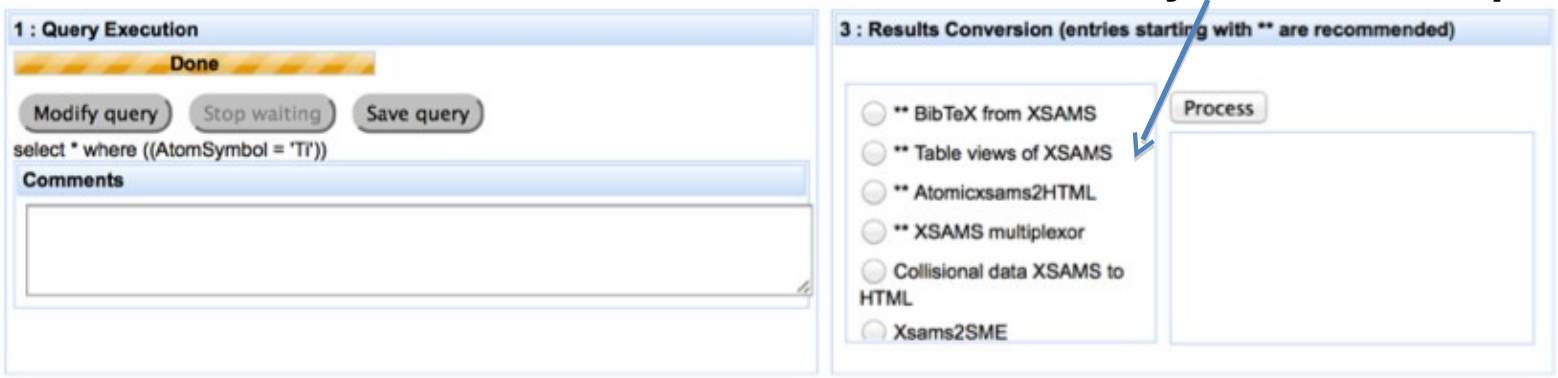
Looking for data : Advanced query



Only possible through SPECIES Database based on InchiKey and VAMDC Identifier

Results visualization

XSAMS Processor Services independant of Portal: can have your own on portal



2 : Results by node

Name	Convert	Response	Download	Species	States	Processes	Radiative	Collisions	Non Radiative
Chianti	☑	OK (13/04/2012 02:00)	XSAMS	9	7035	2080	2080	0	0
TIPbase : VAMDC-TAP interface	☐	Select for processing 012 00:00)	XSAMS	2	4	3	0	3	0
VAMDC species-DB	☐	OK	XSAMS	11	0	0	0	0	0
Belgrade electron/atom(molecule) database (BEAMDB)	☐	OK	XSAMS	0	0	0	0	0	0
VALD (atoms)	☐	TRUNCATED (18/12/2012 00:00) (1%)	XSAMS	0	0	7018411	7018411	0	0
Spectr-W3	☐	TRUNCATED (11/12/2013 19:00) (13%)	XSAMS	3	581	999	999	0	0
Stark-b	☐	TRUNCATED (11/02/2014 00:00) (50%)	XSAMS	4	15	16	16	0	0
JPL database: VAMDC-TAP service	☐	TRUNCATED (04/02/2015 14:28) (1%)	XSAMS	0	0	0	0	0	0

Results visualization

Menu

- Export as CSV
- Export as JSON
- Export as VOTable
- Send with samp
- Reset page

Sources

Id	Title	Origin	Authors	Year	Link
BTopbase-19	Atomic data for opacity calculations. VII - Energy levels, f values and photoionisation cross sections for He-like ions	journal : Journal of Physics B Atomic Molecular Physics (Vol : 20 , Page Begin : 6457 , Page End : 6476)	Fernley, J. A.; Seaton, M. J.; Taylor, K. T.;	1987	http://cdsads.u-strasbg.fr/abs/1987JPhB...20.6457F
BTopbase-26		journal : unpublished	Seaton, M. J.;	1995	http://xsams-processors.obspm.fr/applyXSL/atomicxsams2html/result/1023

Results from Topbase VAMDC node

Unselect all	Specion X	Wavelength(A) X	A X	Weighted Oscillator Strength X	Lower state source X	Lower energy(Ry) X	Lower ionization(Ry) X	Lower statistical weight X	Lower parity X	Lower configuration X	Lower coupling X	Upper state source X	Upper energy(Ry) X	Upper ionization(Ry) X	Upper statistical weight X	Upper parity X	Upper configuration X	Upper coupling X
☑	He 2	303.797315958	20043477020.3	0.832	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.0	1.0	6	odd	2p	L=1 S=0.5 Multiplicity=2
☑	He 2	256.328953298	5346620510.16	0.158	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.555556	0.444444	6	odd	3p	L=1 S=0.5 Multiplicity=2
☑	He 2	243.037852766	2183221280.01	0.058	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.75	0.25	6	odd	4p	L=1 S=0.5 Multiplicity=2
☑	He 2	237.341653092	1101219463.61	0.0279	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.84	0.16	6	odd	5p	L=1 S=0.5 Multiplicity=2
☑	He 2	234.357922757	631513908.254	0.0156	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.888889	0.111111	6	odd	6p	L=1 S=0.5 Multiplicity=2
☑	He 2	232.59481688	395770867.642	0.00963	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.9183674	0.0816326	6	odd	7p	L=1 S=0.5 Multiplicity=2
☑	He 2	231.464621682	264355160.481	0.00637	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.9375	0.0625	6	odd	8p	L=1 S=0.5 Multiplicity=2
☑	He 2	230.696085868	185072066.972	0.00443	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.9506173	0.0493827	6	odd	9p	L=1 S=0.5 Multiplicity=2
☑	He 2	230.149481786	134741888.818	0.00321	BTopbase-26	0.0	4.0	2	even	1s	L=0 S=0.5 Multiplicity=2	BTopbase-26	3.96	0.04	6	odd	10p	L=1 S=0.5 Multiplicity=2

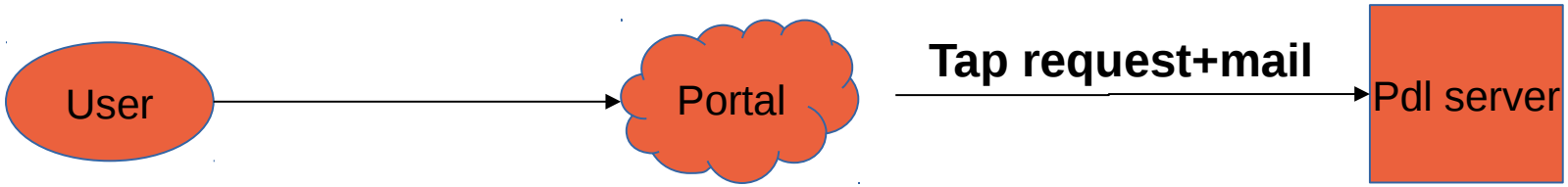
Asynchronous requests

- The returned files are truncated above a certain volume limit (decided by data provider)
  - For policy reason
  - For technical reasons (execution time, volume)

- We need to allow the possibility to retrieve very large files (when this is allowed by the provider)

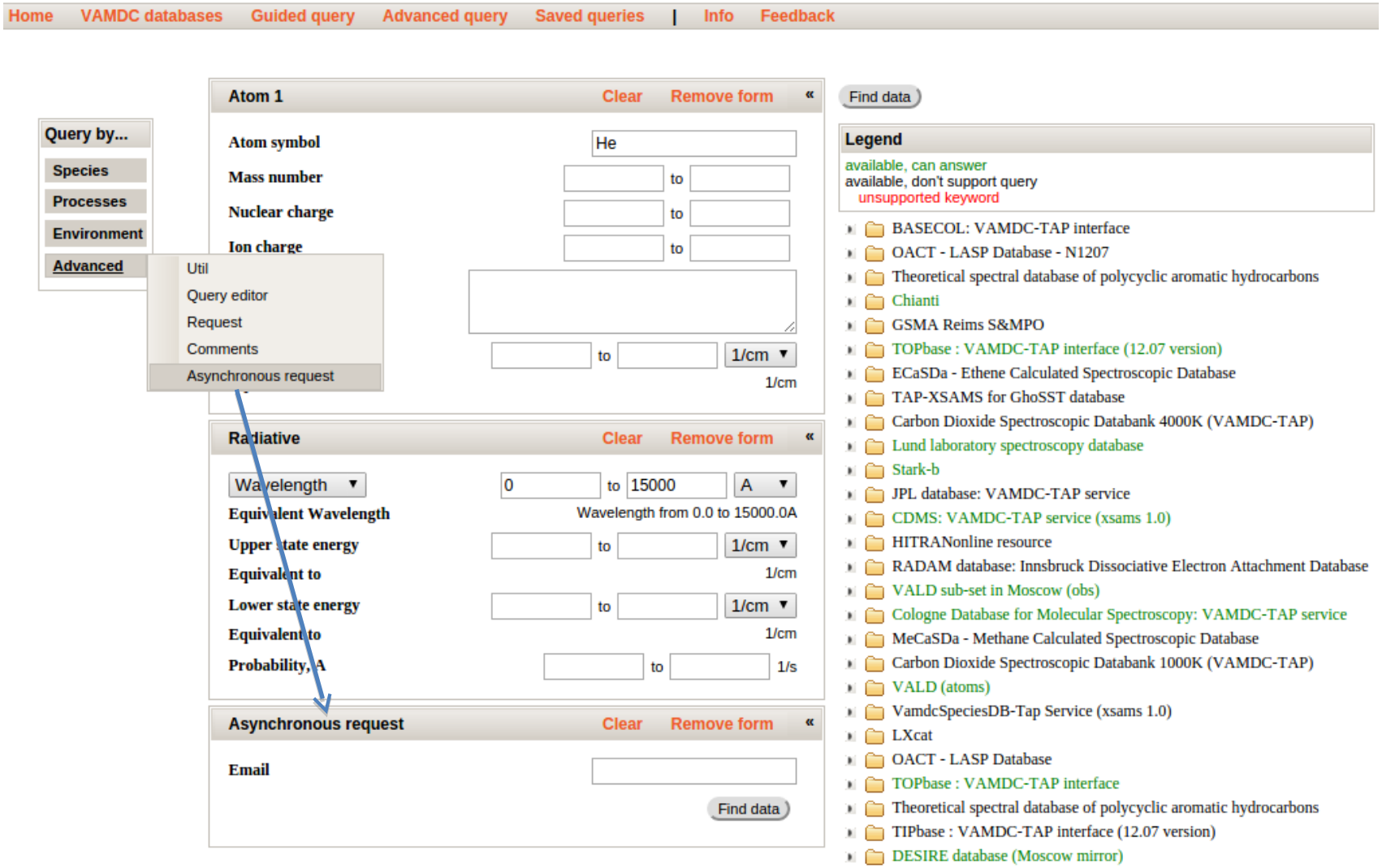
- We chose PDL because :
  - it was very fast do develop an asynchronous web service and to interface it with the VAMDC portal.
  - it provides a convenient way for job monitoring, based on the existing PDL framework

Asynchronous requests

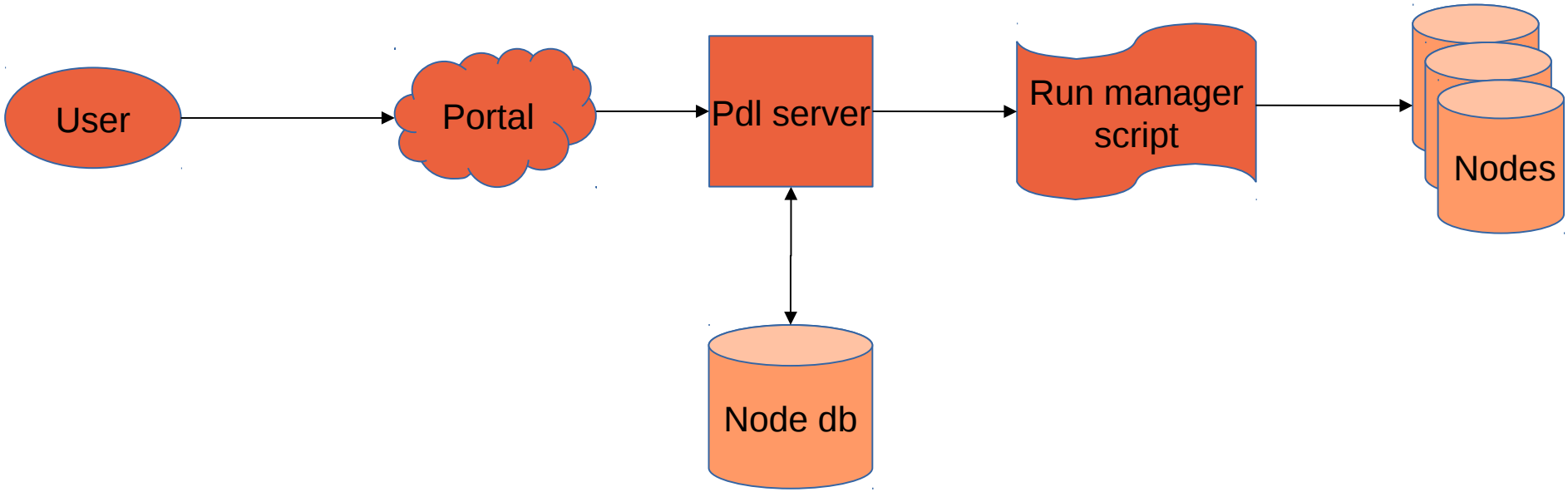


- Available in Advanced query interface
- Parameters sent to PDL server :
  Tap request
  User email address for monitoring

Asynchronous requests



Asynchronous requests



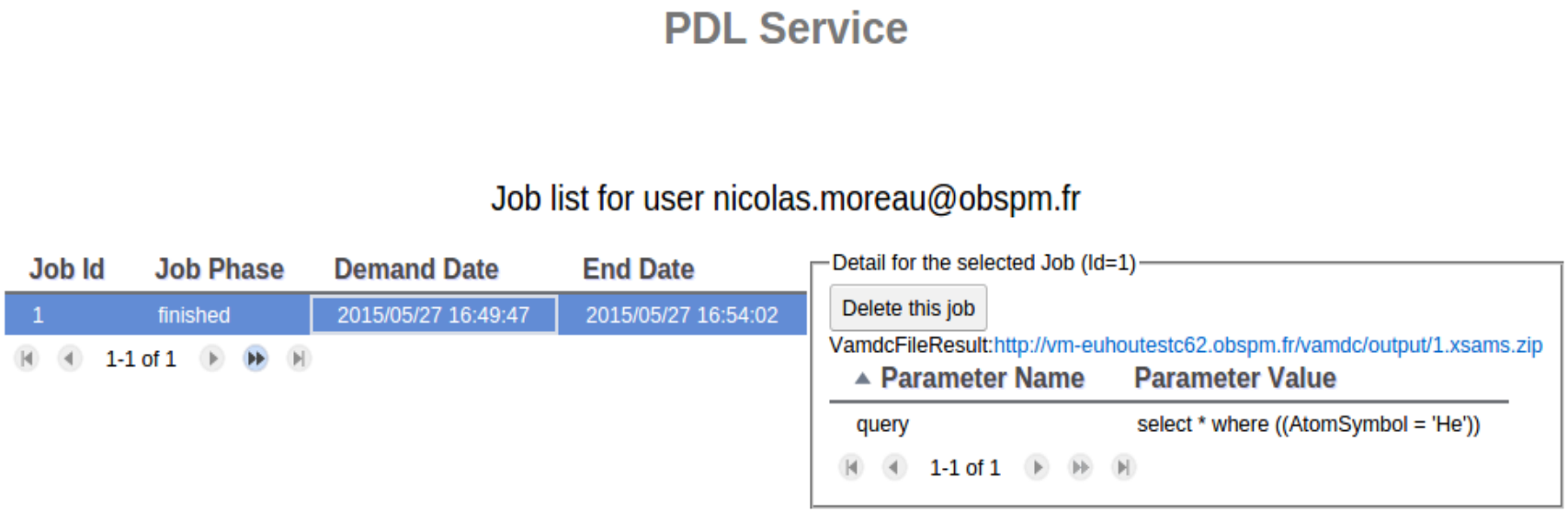
- PDL Server has its own node DB
- Nodes are modified to return full content
- Informations will be in registry
- Request sent to a script that executes them
- All results returned in an compressed archive file

Asynchronous requests

- User receives a mail when he creates a request and when it has been completed

- He/She can access a monitoring web interface (developped with GWT) :
  - Status of request
  - Download results
  - Delete request and results

Asynchronous requests



- Results are kept in cache for 30 days, then deleted

Conclusion

- Some evolutions are planned :
  - Look for collisional data in guided interface
  - A new CSS closer to the VAMDC website one

- Some new processors

- For any question/suggestion related to the portal :
  nicolas.moreau@obspm.fr

- For any question/suggestion related to PDL :
  carlo-maria.zwolf@obspm.fr