

# Implementing SLAP and VAMDC in SPLAT

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- ▶ SPLAT-VO is a graphical tool for analysing astronomical spectra, supports SSAP and ObsCore
- ▶ Originally: User can display pre-recorded line identifiers
- ▶ Would be nice to have more flexibility, by using SLAP or/and VAMDC

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  - ▶ Now: three services found, two working, one known working service not in Registry (splatalogue)

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  - ▶ returns parameters that are present in SSLDM
  - ▶ Using VAMDC provided external libraries
- ▶ Difficult to map information from one data model to the other



## list of SSLDM parameters that have been mapped

Name	SSLDM Utype	VAMDC
title	ssldm:line.title	- (created)
element	ssldm:line.species	ElementSymbol
wavelength	ssldm:line.wavelength.value	EnergyWavelength
air wavelength	ssldm:line.airWavelength.value	EnergyWavelength
initial energy	ssldm:line.initialLevel.energy.value	(AtomicState) IonizationEnergy
final energy	ssldm:line.finalLevel.energy.value	(AtomicState) IonizationEnergy
stage	-	IonCharge
einsteinA	ssldm:line.einsteinA.value	TransitionProbabilityA
Initial level	ssldm:line.initialLevel	( AtomicState) Description
final level	ssldm:line.finalLevel	(AtomicState) Description
oscillator strength	ssldm:line.oscillatorStrength	ProbabilityOscillatorStrength
weighted oscillator strength	ssldm:line.weightedOscillatorStrength	ProbabilityWeightedOscillatorStrength

- ▶ information not always present

- ▶ Proposal in DAL for updating SSLDM
- ▶ better definition of Species (right now only a human readable String like H II)
- ▶ introduction of Ionisation stage/Ion Charge in SSLDM
- ▶ ...

# Where to get it



- ▶ Beta version of SPLAT-VO with SLAP and VAMDC can be retrieved at <http://www.g-vo.org/pmwiki/About/SPLAT>
- ▶ functionality will be expanded

Coordinate ranges:

ID	Lower bound	Upper bound
0	4457.038	4618.351

Element:  Stage:

Tags:

SLAP Services | VAMDC Services

short name	title
iasdslap	IASD ESA Slap
NIST SLAP	NIST Atomic Spectra
TOSS slap	TOSS -- Tübingen Oscillator

Query results

Index	Wavelength	Title	Element
1	4.458474E-7	Na II 4457.223 A	Na
2	4.458487E-7	Th I 4457.23618 A	Th
3	4.458493E-7	Ne II 4457.242 A	Ne
4	4.458493E-7	Ne II 4457.242 A	Ne
5	4.458588E-7	Kr II 4457.25 A	Kr
6	4.458598E-7	Hf I 4457.34 A	Hf
7	4.458667E-7	Ne II 4457.3507 A	Ne
8	4.458689E-7	Mo I 4457.354 A	Mo
9	4.458678E-7	Nb I 4457.42 A	Nb
10	4.458678E-7	Ti I 4457.427 A	Ti
11	4.458688E-7	Zr I 4457.431 A	Zr
12	4.458693E-7	Th II 4457.4418 A	Th
13	4.458738E-7	V I 4457.48 A	V
14	4.458778E-7	Th II 4457.5264 A	Th
15	4.458888E-7	Mn I 4457.55 A	Mn
16	4.458943E-7	Cs II 4457.6898 A	Cs
17	4.459038E-7	V I 4457.76 A	V
18	4.459053E-7	Th II 4457.7820 A	Th
19	4.459253E-7	Th I 4458.00152 A	Th

