

SLAP Evolution

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What happened since Santiago

- In Santiago :
 - WD with upgrade of query parameters and response format
 - No major change on protocol interface
 - Outdated features (no VOSI endpoints)

- Since then :
 - Changes on the query interface
 - VOSI endpoints and query endpoints added

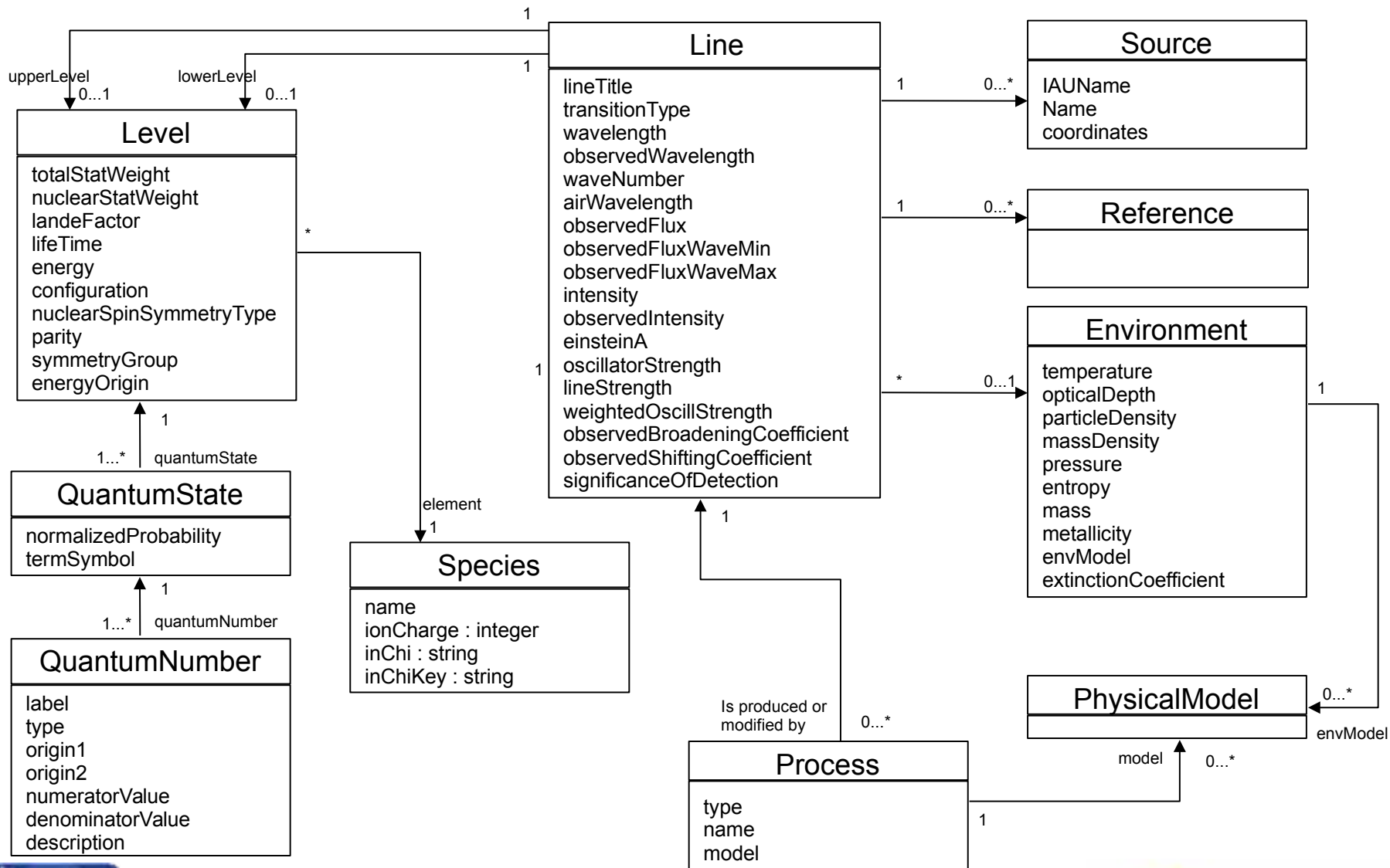
1. Data Model

2. Protocol

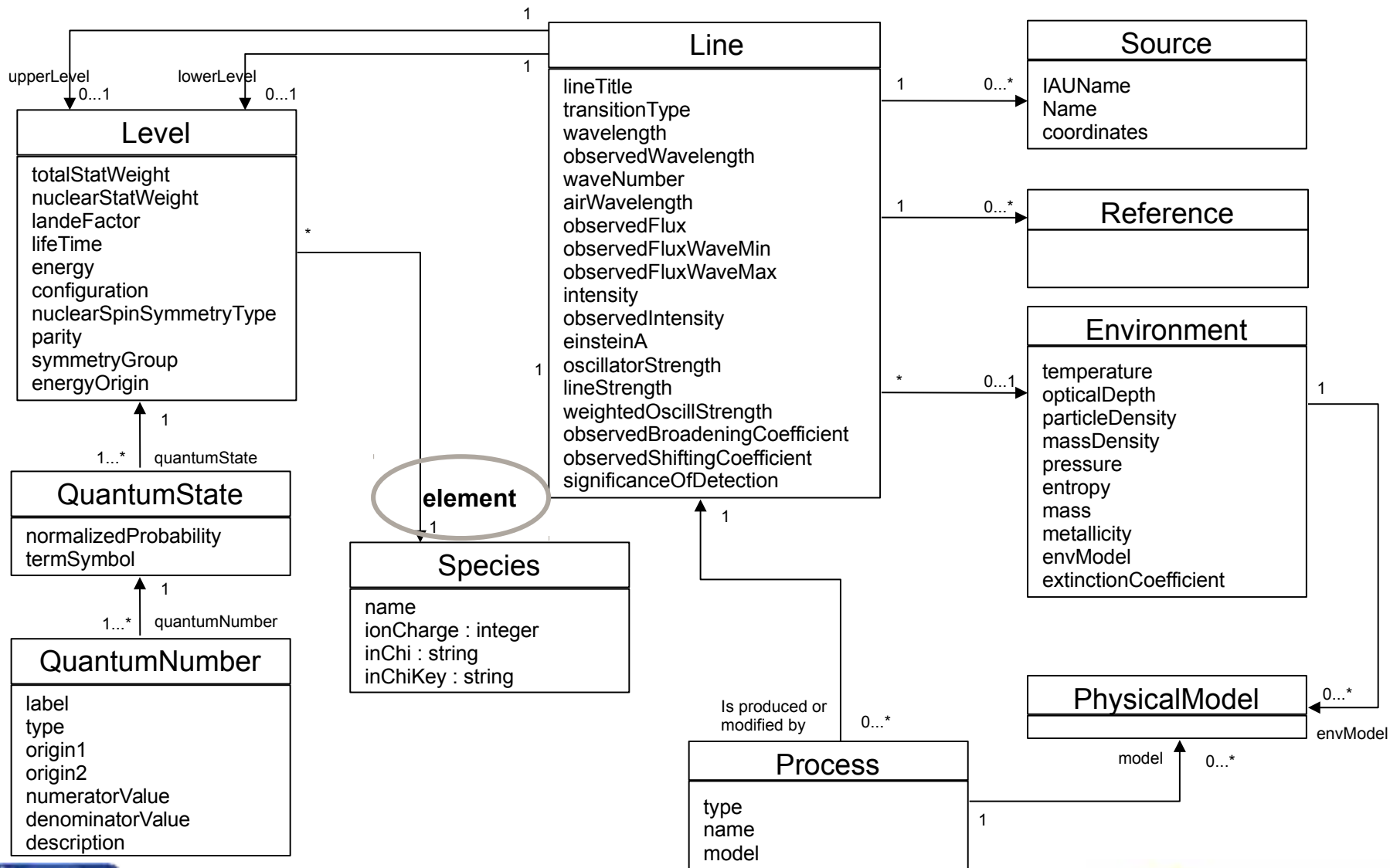
3. Implementation example

4. What's next ?

Proposed data model



Proposed data model



- Can handle all use cases of previous SSLDM (radiative transitions)
- Can be extended (ionization)
- Closer to VAMDC Data Model, easy to go from one to the other
- But
 - Species definition is still lacking
 - Quantum number descriptions is not compatible

1. Data Model

2. Protocol

3. Implementation example

4. What's next ?

Metadata specifications

- Adapted to VOSI specifications
- FORMAT=METADATA removed
- Addition of endpoints :
 - /capabilities
 - /availabilities

Service interface

- Two query modes are available :
 - Lines (list of lines according to given parameters)
 - Species (list of species queryable in the service)

Service interface

- Two query modes are available :
 - Lines (list of lines according to given parameters)
 - Species (list of species queryable in the service)
- Previously proposed version used doQuery parameter :

doQuery=[lines | request]

- Now replaced by two sync endpoints :
 - /lines
 - /species

Resource type	Resource name	Required
DALI-sync	{lines}	yes
DALI-sync	{species}	no
DALI-examples	/examples	no
VOSI-availability	/availability	yes
VOSI-capabilities	/capabilities	yes

Examples

All species in a service :

<http://serviceprovider.org/slap?request=querySpecies>

Replaced by :

<http://serviceprovider.org/slap/species>

Examples

All lines between 900 and 905 Angstroms in a service :

<http://serviceprovider.org/slap?request=queryLines&WAVELENGTH=9e-8/9.05e-8>

Replaced by :

<http://serviceprovider.org/slap/lines?WAVELENGTH=9e-8+9.05e-8>

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4. What's next ?

- Implementation of SLAP 2.0 in VAMDC node software
- Extension of the middleware used to deploy a VAMDC-TAP service on a database
- List of species in a service :
 - <http://sesam.obspm.fr/18.05/vamdc/slap/species>
- List of lines in a wavelength interval :
 - <http://sesam.obspm.fr/18.05/vamdc/slap/lines?WAVELENGTH=9.01e-8%209.03e-8>

1. Data Model
2. Protocol
3. Implementation example
- 4. What's next ?**

Limitation : Search by species type

- Optional CHEMICAL_SPECIES parameter
- No problem for atoms (search by atom symbol)
- What to use for molecules ?
- Nothing was specified in SLAP 1.0
- Possible choices :
 - Chemical name (carbon monoxide, dioxygen ...)
 - Stoichiometric formula
 - Formula (CO₂, CO ...)
 - INCHIKEY
- Most reliable is INCHIKEY but not very user friendly
- Accept any value returned in "species" query response ?

Units

Parameter	SLAP Unit	Spectroscopist unit
WAVELENGTH	meter	angstrom or nanometer
ENERGY	joules	cm-1

- In Trieste we decided to upgrade SLAP for VAMDC compatibility
- SSLDM has some limitations (quantum numbers, species definition)
- Is it enough as it is or do we need to work on a bigger DM upgrade ?