

Observation Facilities Update

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Work Plan

There are several objectives to this action:

- Create a **name resolver** for observation facilities (ground based observatories and space missions)
- Promote a **standard nomenclature** for Observation Facilities
- There are several lists of observation facilities and a need to be able to search for observation facilities, whatever alias is used. This means: being able to link those lists.
- Help **observation planning** with provision of sky horizon elevations at each Observatory
- Related to that: find a way to generate automatically horizon from google API, or GIS ? Then users can edit it for fine tuning buildings etc. Maybe use something like the footprint editor? http://aladin.u-strasbg.fr/footprint_editor/
- Set up a database for **amateur astronomer** observatories
- **Extend the EPN-TAP core** data model in order to be able to include observatories and **share the 'matrix of observatories' (<http://iwf.oeaw.ac.at/matrix/>) database via EPN-TAP**. The basis for the data model additions will be provided by VOFacility and VOResource definitions.

Inventory

- <https://voparis-confluence.obspm.fr/display/VES/Existing+List+of+Observatories+and+Spacecraft>
- Austrian team started to cross-match all identified lists. Result to be used in their “Observatory Matrix”

```
{ "nssdc:2004-023A": { "alternateName": { "namingAuthority": "nssdc", "name": "Navstar 55", "id": "2004-023A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=2004-023A", "title": "NSSDC catalog entry" }, "launchDate": "2004-06-23" }, "nssdc:1973-105A": { "alternateName": { "namingAuthority": "nssdc", "name": "Cosmos 625", "id": "1973-105A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1973-105A", "title": "NSSDC catalog entry" }, "launchDate": "1973-12-21" }, "nssdc:1967-023A": { "alternateName": { "namingAuthority": "nssdc", "name": "Cosmos 148", "id": "1967-023A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1967-023A", "title": "NSSDC catalog entry" }, "launchDate": "1967-03-16" }, "xephem:Lick Observatory (36-inch)": { "alternateName": { "namingAuthority": "xephem", "name": "Lick Observatory (36-inch)", "id": "xephem:Lick Observatory (36-inch)" }, "facilityType": "observatory", "location": { "coordinates": { "lat": 37.333333333333336, "alt": 1290.0, "lon": 121.65 } }, "nssdc:1977-001A": { "alternateName": { "namingAuthority": "nssdc", "name": "Cosmos 888", "id": "1977-001A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1977-001A", "title": "NSSDC catalog entry" }, "launchDate": "1977-01-06" }, "nssdc:1977-054A": { "alternateName": { "namingAuthority": "nssdc", "name": "Molniya 1-37", "id": "1977-054A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1977-054A", "title": "NSSDC catalog entry" }, "launchDate": "1977-06-24" }, "xephem:Kenosha": { "alternateName": { "namingAuthority": "xephem", "name": "Kenosha", "id": "xephem:Kenosha" }, "facilityType": "observatory", "location": { "country": "Wisconsin", "coordinates": { "lat": 42.595277777777778, "alt": 185.9, "lon": 87.836388888888889 } }, "nssdc:1981-003A": { "alternateName": { "namingAuthority": "nssdc", "name": "Cosmos 1238", "id": "1981-003A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1981-003A", "title": "NSSDC catalog entry" }, "launchDate": "1981-01-16" }, "iau-mpc:106": { "alternateName": { "namingAuthority": "iau-mpc", "name": "Crni Vrh", "id": "iau-mpc:106" }, "facilityType": "observatory", "location": { "coordinates": { "cos": 0.69662, "lon": 14.0711, "sin": 0.71519 } }, "iau-mpc:107": { "alternateName": { "namingAuthority": "iau-mpc", "name": "Cavezzo", "id": "iau-mpc:107" }, "facilityType": "observatory", "location": { "coordinates": { "cos": 0.70998, "lon": 11.003, "sin": 0.70186 } }, "iau-mpc:104": { "alternateName": { "namingAuthority": "iau-mpc", "id": "104", "name": "San Marcello Pistoiese" }, "facilityType": "observatory", "location": { "coordinates": { "cos": 0.71985, "lon": 10.8042, "sin": 0.69202 } }, "nssdc:1972-018A": { "alternateName": { "namingAuthority": "nssdc", "name": "DMSP 5B/F2", "id": "1972-018A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1972-018A", "title": "NSSDC catalog entry" }, "launchDate": "1972-03-24" }, "iau-mpc:103": { "alternateName": { "namingAuthority": "iau-mpc", "id": "103", "name": "Ljubljana" }, "facilityType": "observatory", "location": { "coordinates": { "cos": 0.694, "lon": 14.47, "sin": 0.715 } }, "iau-mpc:100": { "alternateName": { "namingAuthority": "iau-mpc", "id": "100", "name": "Ahtari" }, "facilityType": "observatory", "location": { "coordinates": { "cos": 0.462, "lon": 24.13, "sin": 0.884 } }, "iau-mpc:101": { "alternateName": { "namingAuthority": "iau-mpc", "id": "101", "name": "Kharkov" }, "facilityType": "observatory", "location": { "coordinates": { "cos": 0.64403, "lon": 36.2322, "sin": 0.76246 } }, "nssdc:1976-028A": { "alternateName": { "namingAuthority": "nssdc", "name": "Cosmos 810", "id": "1976-028A" }, "facilityType": "spacecraft", "referenceURL": { "url": "http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1976-028A", "title": "NSSDC catalog entry" }, "launchDate": "1976-03-26" },
```

Resolver at IMCCE: Quaero

- Same name resolver as SSoDNet, using a rest interface.

- Some data already included:

<https://api.ssodnet.imcce.fr/quaero/1/sso/ACE>

Result:

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{"class":["Orbiter","Payload","Operational"],  
"updated":"2017-05-09","name":"ACE","aliases":  
["1997-045A","24912","ADVANCED COMPOSITION  
EXPLORER"],"parent":"Sun","system":"Sun","id":"ACE",  
"ephemeris":false,"type":"Spacecraft"}
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