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## CheatSheet for using seismological data

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# CheatSheet for using seismological data

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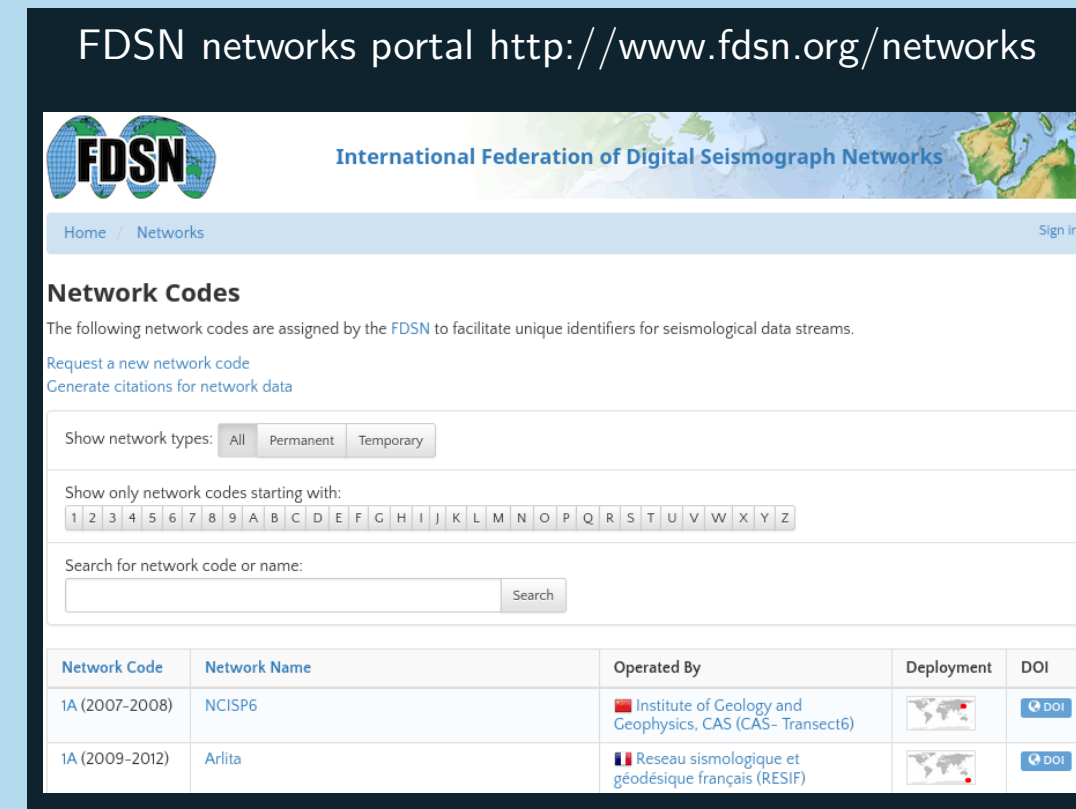
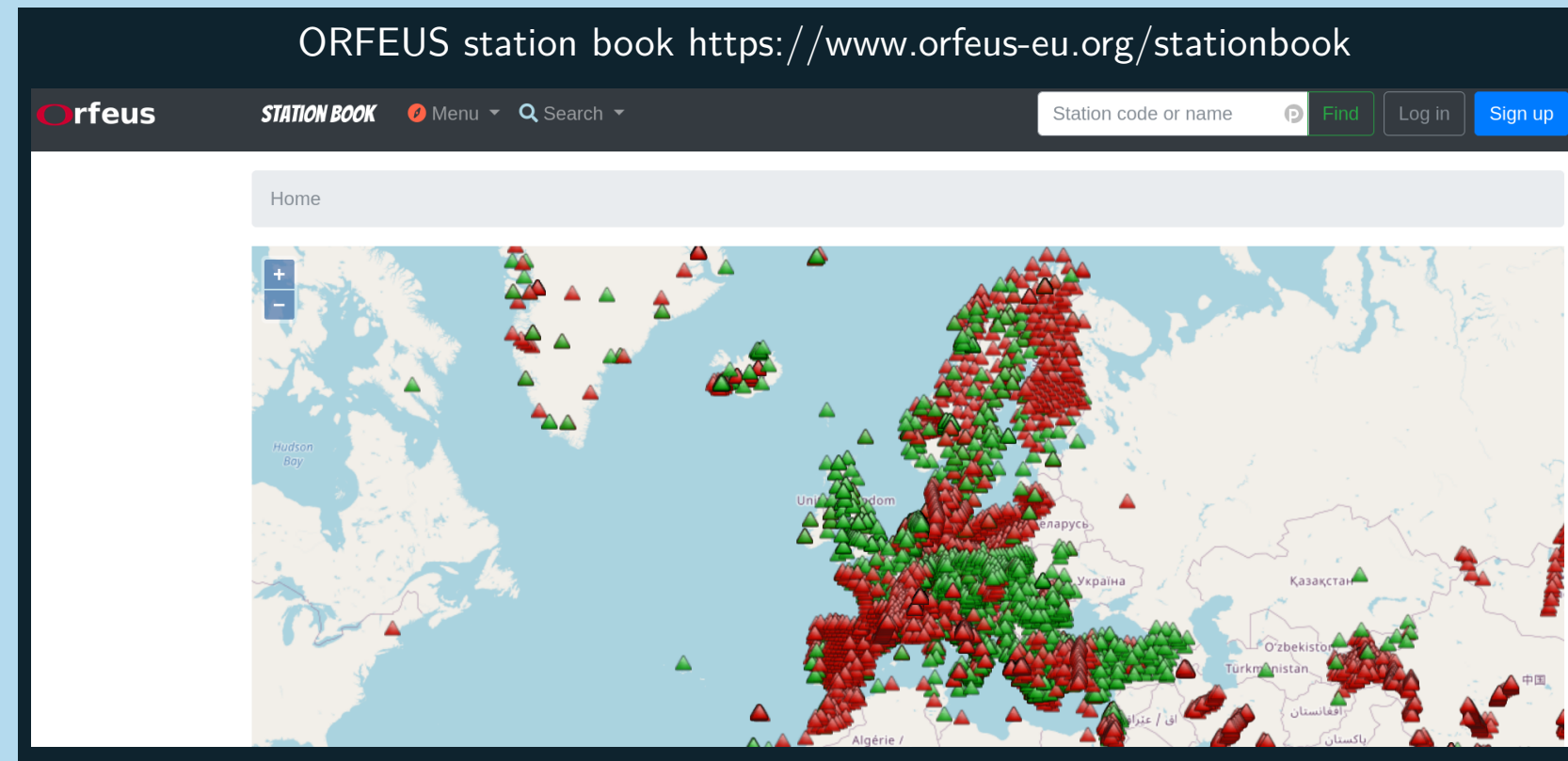
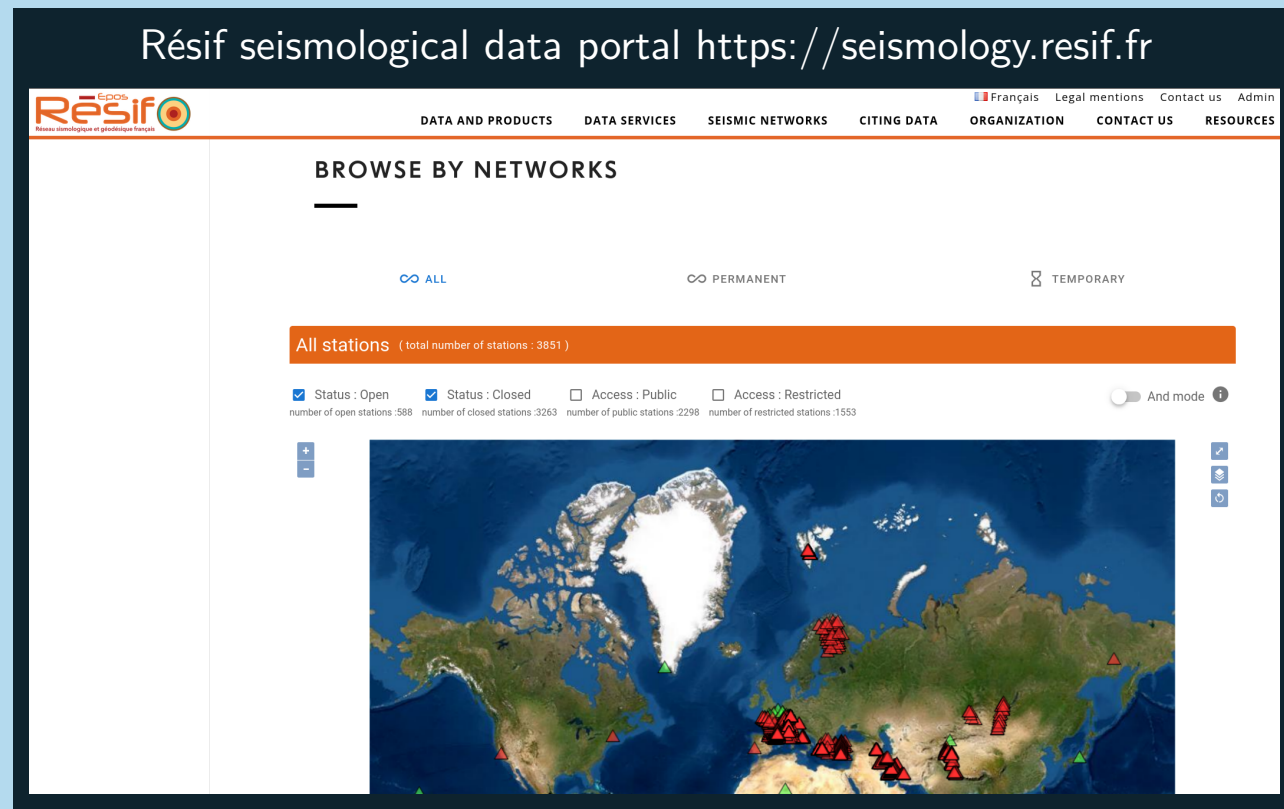
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## 1. Find the data

Résif-DC is one of the 19 FDSN compliant seismological data repositories. The data is hosted in one of them, but which one? There are interfaces for human and for machines or software.

### Human being



### Machine

- Routing services : FDSN, EIDA
  - EPOS DCAT-AP description
- Used by obspy or smart clients or other software.

## 2. Get the metadata, evaluate the data quality

### Human being

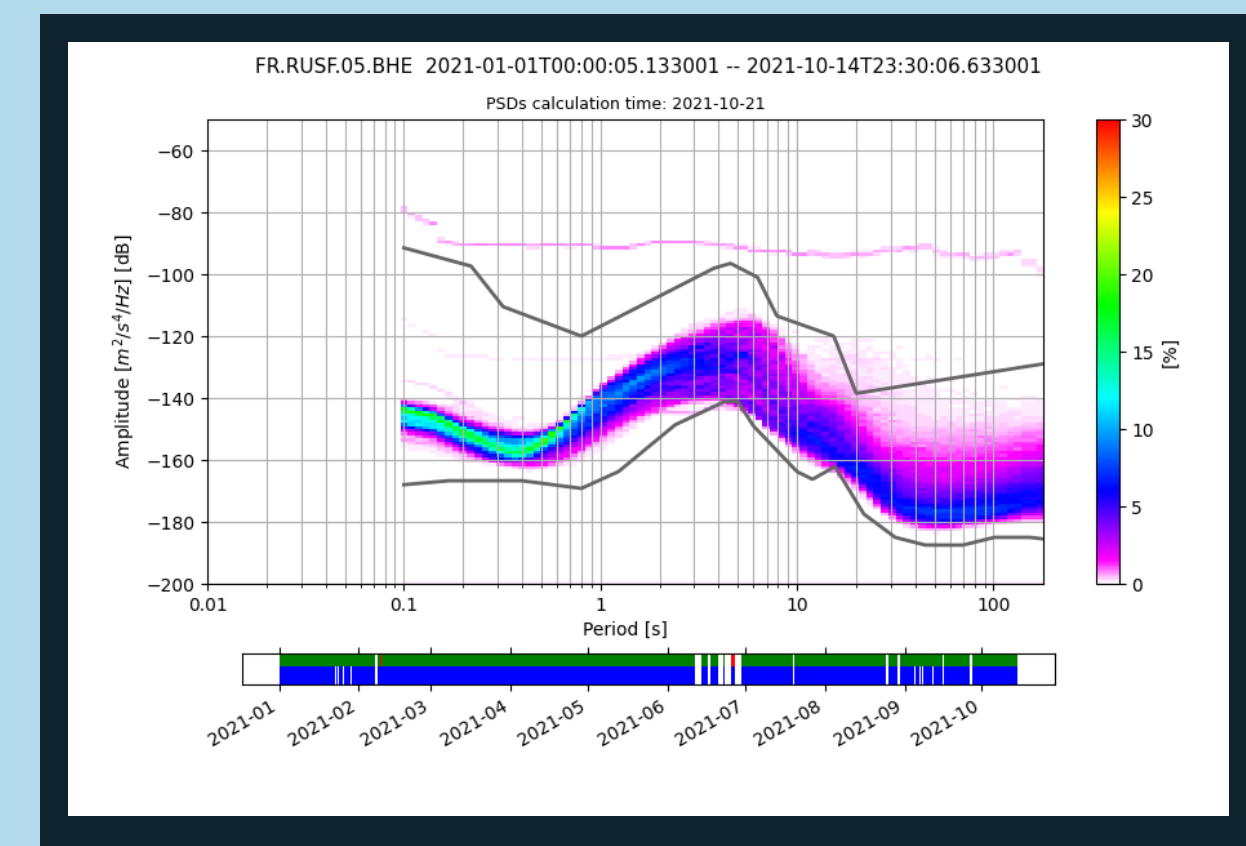
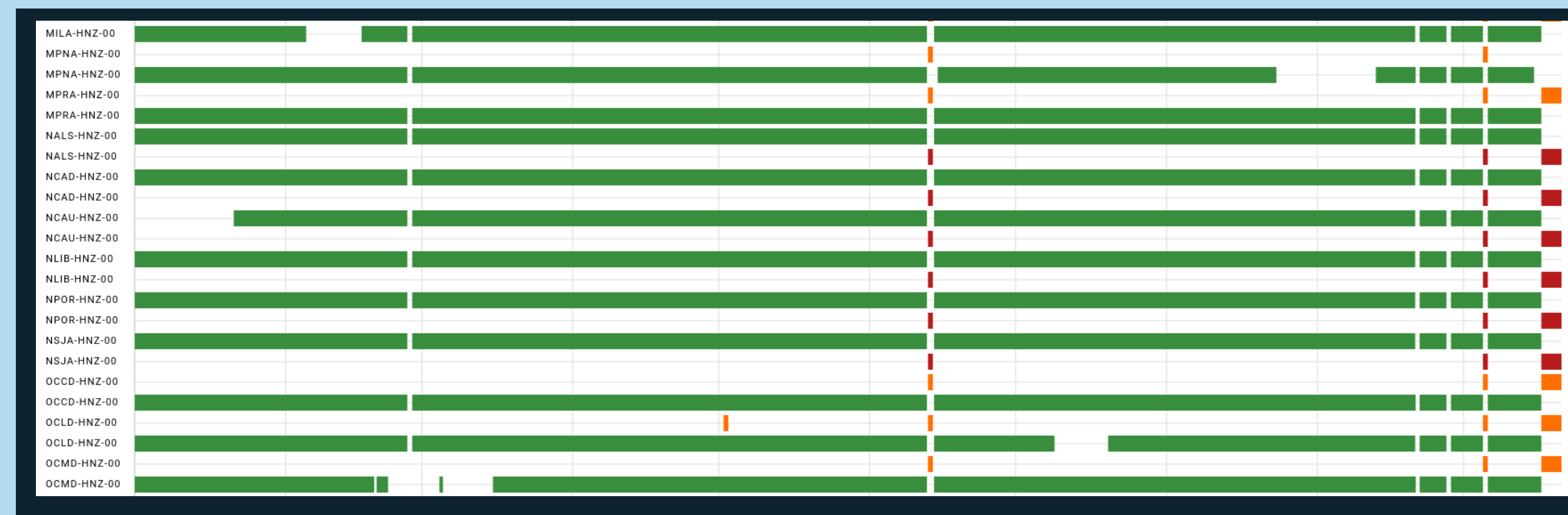
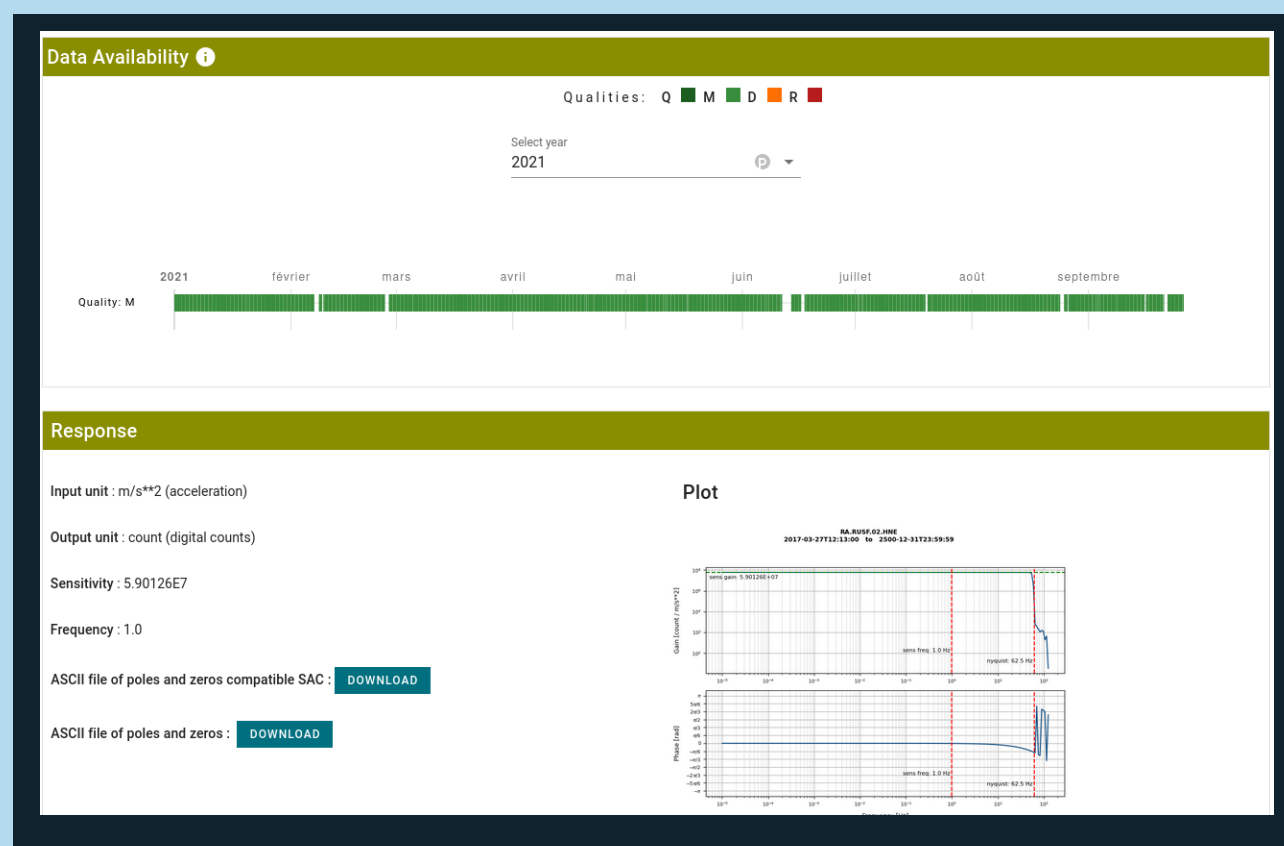
Résif-DC offers a user-friendly view of the metadata at network, station and channel level.

Those views aggregate metadata from several places:

- StationXML for seismology related metadata
- Data and services access instructions
- Citation and licences information
- Waveform availability
- Instrumental response evaluation graph
- Spectrograms and PSD

### Machine

- `fdsnws-station` to get StationXML metadata
- `fdsnws-availability` to get waveform availability
- `DataCite DOI metadata` to get usage information (Licence)



## 3. Get the data

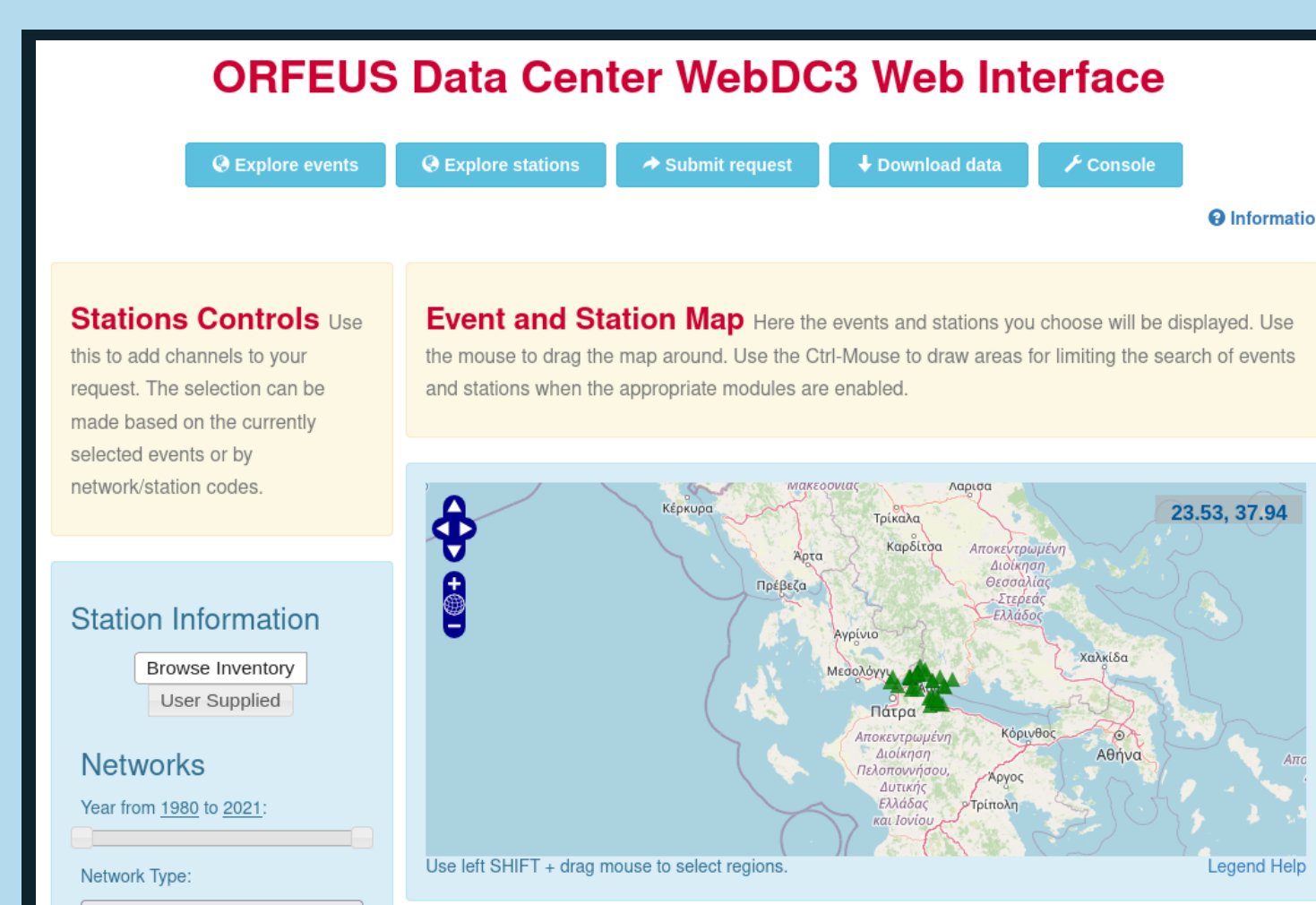
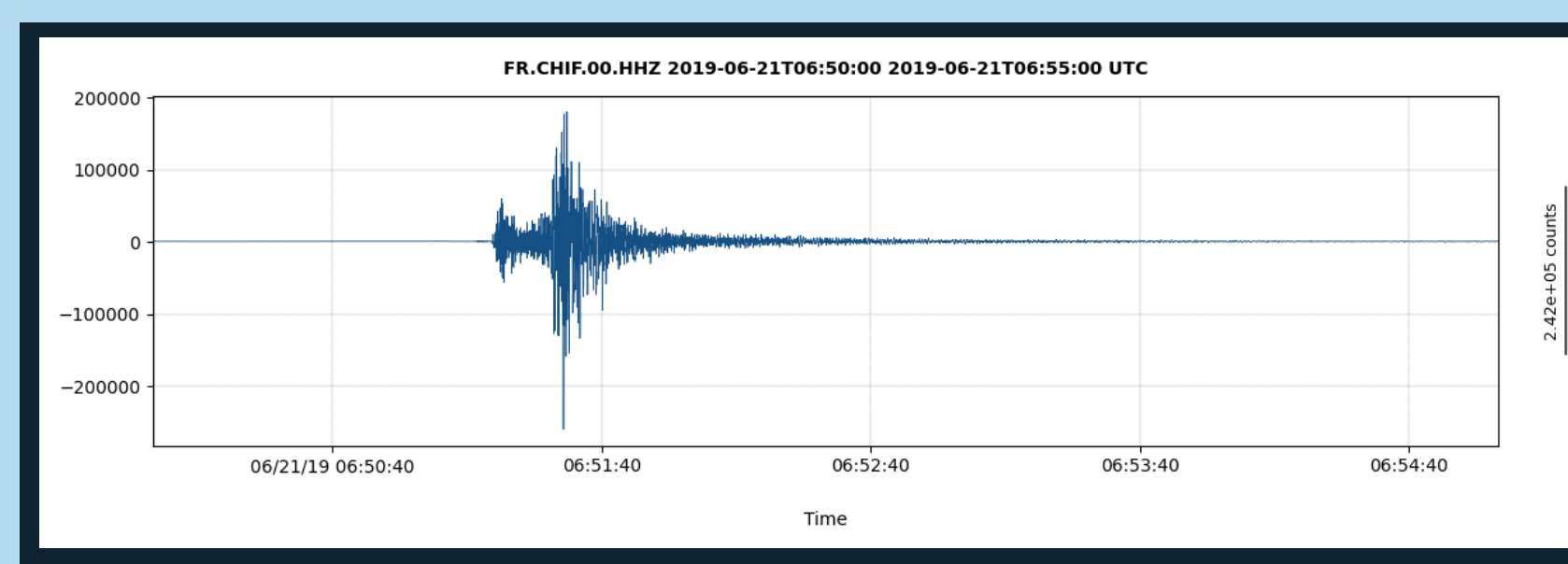
### Human being

Data can be downloaded using :

- webdc3 online <http://orfeus-eu.org/webdc3>
  - `fdsnfetch` scripts
  - EPOS IC data portal (experimental)
  - plain `fdsnws-dataselect` HTTP queries.
- URL builder in <http://seismology.resif.fr> can help
- `resifws-timeseries`

### Machine

- `fdsnws-dataselect` HTTP queries
- ObsPy Python library
- EPOS IP data portal
- EIDA federator



## 4. Do science

## 5. Publish your results

**Very important : Cite the data in your references as a normal paper.**

- Each seismological network has a unique identifier, pointing to its landing page. There you shall find the **citation** informations and guidelines.
- Use **DataCite's DOI Citation Formatter** to get references in various formats (bibtex) <https://citation.crosscite.org/>
- Use FDSN's network citation service to get references for complex data mix <http://fdsn.org/networks/citation/>

## 6. Need help ?

helpdesk: [sismo-help@resif.fr](mailto:sismo-help@resif.fr)

Documentation of all the webservice : <https://ws.resif.fr>

