

### Overview of **ORFEUS EIDA** Services and How to Use Them

Webinar – 4 April 2024, 10AM Zürich time

*C. Cauzzi on behalf of the ORFEUS EIDA-SMC*



The webinar will be recorded - please turn your mics and cameras off

### Overview of **ORFEUS-Promoted EIDA** Services and How to Use Them

Webinar – 4 April 2024

*C. Cauzzi on behalf of the ORFEUS EIDA-SMC*



The webinar will be recorded - please turn your mics and cameras off

**TODAY**

## **“European Integrated Data Archive - EIDA”**

### **services and products:**

- Raw waveforms
- Basic station metadata

## **“Strong-Motion / Event-based”**

### **data services and products:**

- Processed waveforms & PGMs
- Enhanced event and site information

## **“Mobile instrument pools”**

### **services and products:**

Enhancing community access to onshore and offshore portable instrumentation

# ORFEUS EIDA Services at a Glance



## Webinterface

Graphical Interface for waveform and metadata access.



## Webservices

APIs for data and metadata access.



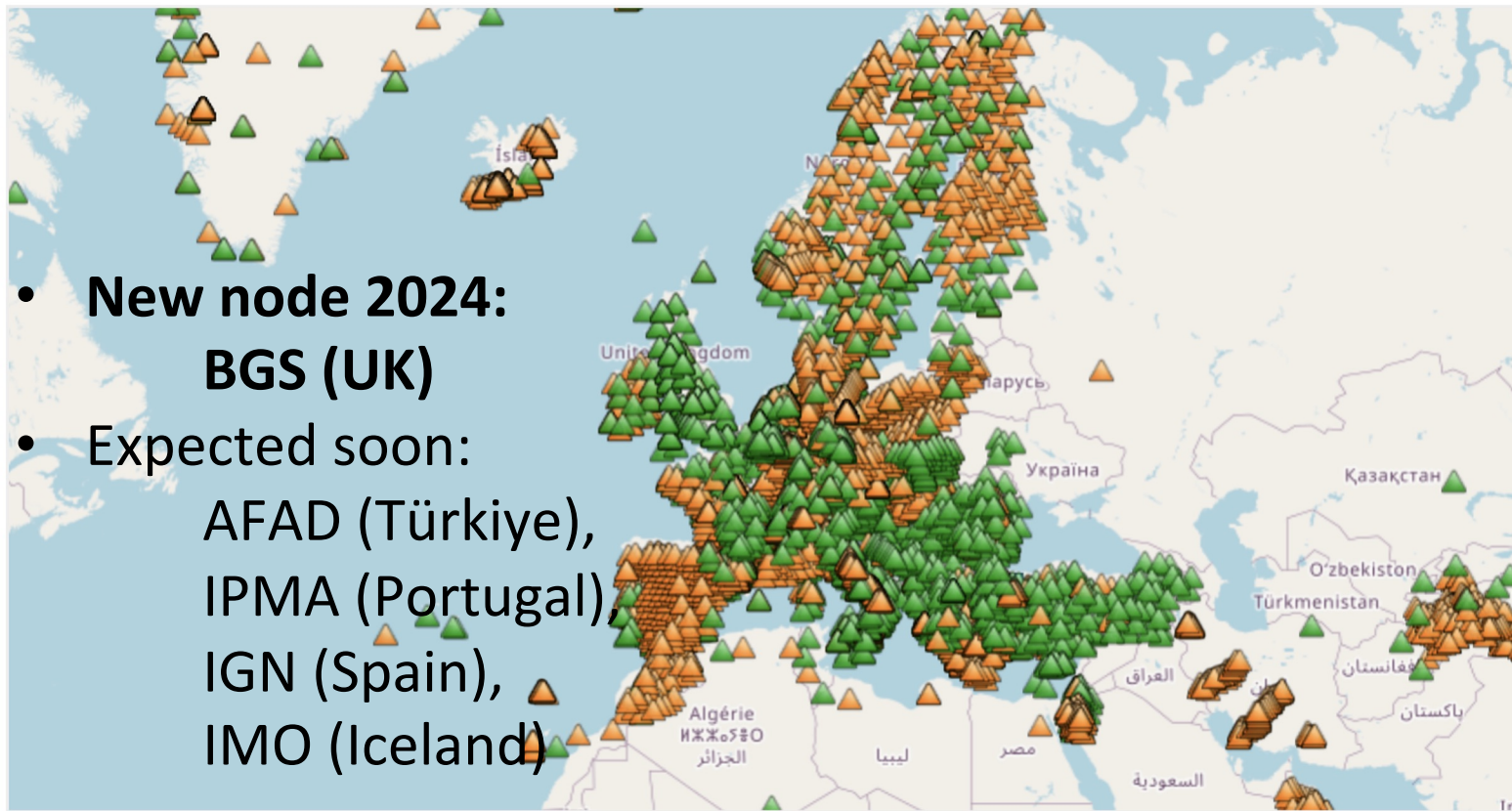
## Data Quality

Interfaces for data quality visualization.



## Station Book

Access to the entire EIDA station inventory.



- ~ 22,050 stations (~4,700 in operation)
- **BB, SM, SP, OBS, infrasound, gravity, DAS ...**
- Focus on Euro-Med, yet global experiments included
- ~130 permanent networks; ~320 temporary networks -> supplier letters to EIDA nodes -> MoU with ORFEUS

Global collaborations: FDSN, EarthScope, etc .



<https://orfeus-eu.org/data/eida/>

[https://orfeus.readthedocs.io/en/latest/eida\\_intro.html#](https://orfeus.readthedocs.io/en/latest/eida_intro.html#)

- Strollo A, Cambaz D, Clinton J, et al (2021) EIDA: The European Integrated Data Archive and Service Infrastructure within ORFEUS. Seismological Research Letters 92:1788–1795.  
<https://doi.org/10.1785/0220200413>

# EIDA demo (CC's checklist, webinar is recorded)

<https://orfeus-eu.org/data/eida/> start page

<https://orfeus-eu.org/webdc3/> interface for data discovery

- possible use case, ETH catalogue, M>3 in March, there is indeed one event in Ticino, look for all HH stations within 1 degree, request data for closest station FUSIO, time window of two minutes centered on OT (save OT for later ...)
- look at data in Jupyter (example\_1 <https://polybox.ethz.ch/index.php/s/7cohNBdDyqbdqXg>)

Switch to webservice: <https://orfeus-eu.org/data/eida/webservices/>

- overview of what dataselect and station are meant for
- retrieve same miniseed and xml using webservice:

<https://eida.ethz.ch/fdsnws/dataselect/1/query?net=CH&sta=FUSIO&channel=HH?&starttime=2024-03-18T15:51:47&endtime=2024-03-18T15:53:47&nodata=404>

<https://eida.ethz.ch/fdsnws/station/1/query?net=CH&sta=FUSIO&channel=HH?&starttime=2024-03-18T15:51:47&endtime=2024-03-18T15:53:47&level=response&nodata=404>

- comment on wildcards and all options
- in Jupyter, show how to use “client.get\_waveforms” and “client.get\_stations” (example 2 <https://polybox.ethz.ch/index.php/s/7cohNBdDyqbdqXg>)

- introduce “availability” here: <https://orfeus-eu.org/data/eida/quality/availability/> and <https://eida.ethz.ch/fdsnws/availability/1/query?net=CH&sta=FUSIO&channel=HH?&starttime=2024-03-18T15:51:47&endtime=2024-03-18T15:53:47&nodata=404>

and its UI terminal interface at <https://github.com/EIDA/a10y/>

- introduce “routing” at the core of the federation: <http://www.orfeus-eu.org/eidaws/routing/1/query?network=CH&service=dataselect>

- show example of dataselect using the federator: <https://federator.orfeus-eu.org/fdsnws/dataselect/1/query?net=CH&sta=FUSIO&channel=HH?&starttime=2024-03-18T15:51:47&endtime=2024-03-18T15:53:47&nodata=404>

- **comment on the rationale behind the ‘federation’: avoid single-access bottle necks, national dcs**

- point to former webinars on AAI (Javier) and combined use of dataselect and wfcatalog (Jarek+Kostas)

Show response at <https://www.orfeus-eu.org/data/eida/quality/response/>

Show <http://orfeus-eu.org/stationbook/> and recall site char effort ongoing in SM group

<https://github.com/EIDA/userfeedback/issues>  
(for issues)

<https://forum.orfeus-eu.org/>  
(for general support)

<https://forum.orfeus-eu.org/c/eida/maintenance>

<https://www.orfeus-eu.org/data/eida/acknowledgements/>

<https://www.fdsn.org/networks/citation/>



## Members of EIDA groups (on ORFEUS Forum) & many others:

A Marmureanu, A Krietemeyer, A Heinloo, A Strollo, A Schloemer, B Goebel, B Baptie, C Cauzzi, C Evangelidis, C Neagoe, D Cambaz, D Giardini, D Senturk, E Della Bina, F Eckel, F Euchner, F Fuchs, F Turhan, G-J van den Hazel, H Pedersen, I Carluccio, J Michalek, J Bienkowski, J Quinteros, J Stevenson, J-M Saurel, JP Pereira Zanetti, J Clinton, J Schaeffer, JA Jara Salvador, K Stammler, K Boukouras, K Kuterdem, L Ottemoeller, L Krischer, L Vecsey, L Trani, M Cocco, M Grunberg, M Fares, M Hoffmann, M Ozer, M Turkoglu, O Natvik, P Boue, P Danecek, P Evans, P Kaestli, P Kolinsky, P Bollard, R Sleeman, R Lockett, R Racine, S Rondenay, S Schneider, S Heimers, S Pintore, S Hemmleb, T Meier, T Megies, T Ergun, W Hanka, T van Eck, V Petrakopoulos, ...

**and sorry for any omissions (and typos ...)!**

<https://forum.orfeus-eu.org/> → Sign Up

The screenshot shows the ORFEUS Forum website interface. At the top, there is a navigation bar with the forum name, a search icon, and buttons for 'Sign Up' and 'Log In'. Below the navigation bar, there is a sidebar on the left with a menu for 'Topics' and 'Categories'. The main content area displays a list of forum topics with columns for 'Topic', 'Replies', 'Views', and 'Activity'. The topics listed include 'ISC internet down', 'Faculty position in seismology at Freie Universität Berlin', 'Unscheduled downtime at Résif', 'Upcoming ORFEUS Webinars', 'New user interface to view EIDA data availability', 'HeaMES 2024 Call for Abstracts', 'Earth Systems Summer School 2024: Applications Open', 'Infrastructure maintenance at ODC (2024-02-02)', and 'Call for abstract ESC2024, 22-27 September 2024 Corfu, Greece - SESSION04'.

Topic	Replies	Views	Activity
ISC internet down General services, downtime	0	8	18h
Faculty position in seismology at Freie Universität Berlin Job Announcements	0	10	4d
Unscheduled downtime at Résif Maintenance services, downtime	0	17	9d
Upcoming ORFEUS Webinars Meetings, Workshops, Training	0	44	13d
New user interface to view EIDA data availability General software	0	33	18d
HeaMES 2024 Call for Abstracts General	2	117	20d
Earth Systems Summer School 2024: Applications Open Meetings, Workshops, Training	0	38	20d
Infrastructure maintenance at ODC (2024-02-02) Maintenance services	1	33	25d
Call for abstract ESC2024, 22-27 September 2024 Corfu, Greece - SESSION04 Meetings, Workshops, Training	0	34	29d

### Overview of **ORFEUS-Promoted EIDA** Services and How to Use Them

Webinar – 4 April 2024

*C. Cauzzi on behalf of the ORFEUS EIDA-SMC*



The webinar will be recorded - please turn your mics and cameras off