Access and review real-time and fully processed seismic event data via a secure web portal, from anywhere at any time

# Athena

## **Critical seismicity information at your fingertips**

## How does Athena support risk management?

- Continually tracks temporal variations in seismicity rates and b-values in your region of interest as a potential measure of the likelihood of occurrence of larger magnitude events
- Measures the impact of detected seismicity via real-time ground motion measurements and reports
- Displays maps of ground shaking distribution showing predicted ground motions in areas with no seismic stations
- Reports on automatic event detection and manual event review response times, with the overwhelming majority of events are detected in under 1 minute
- Sends notifications based on custom magnitude, seismicity rate or ground motion thresholds
- Supports automatic event import from public data feeds as a way of comparing your event source parameters to those from public catalogs





## A nanometrics

## Athena

#### **EVENT PARAMETERS**

- Tracking and display of complete event source parameters including event location, location uncertainty, magnitudes (Mw and ML), moment tensors and focal mechanisms
- Double difference catalogue relocation: event cluster location precision to delineate activated structure
- Station phase pick data
- Station magnitude and amplitude data
- Customized mapping by event attributes with user-provided reference overlays
- Catalog search and reporting capability by any event source parameter

#### **GROUND MOTIONS AND SHAKE MAPS**

- Geographical distribution of ground shaking (PGA, PGV, MMI)
- Calculated ground motions for each station in real-time following an event (PGA, PGV, RSA)
- Color coding of stations and recorded ground motions according to ground shaking intensity
- Shake maps with ground motions in grid points with no stations and as interactive overlays, including displays for larger events

#### WAVEFORMS AND STATION METADATA

- Display of filtered event waveforms with P and S pick overlays
- Waveforms ordering by station or proximity to the event
- Supports downloading of waveform data in MiniSEED format and station metadata in dataless SEED format

#### FREQUENCY-MAGNITUDE DISTRIBUTION PLOTS

- Computation and display of magnitude of completeness (Mc) and b-values
- Custom selection of event clusters in space and time
- Tracking and plotting of temporal variations in b-values in parallel with the seismicity rate graphs, in near real time

## Its ease of use makes for seamless organizational integration

- Moment tensor inversion for single events, event clusters or all events above M 2.0 within an array
- Displays focal mechanisms in Google maps
- Manages instrument and station metadata
- Allows easy selection and download of sections of the catalogue



Supports a large user base, but allows you to grant each user only the privileges they need

Allows for custom branding of the web interface



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