



ObsPy: A Python Toolbox for Seismology and Seismological Observatories

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Python combines the power of a full-blown programming language with the flexibility and accessibility of an interactive scripting language. Its extensive standard library and large variety of freely available high quality scientific modules cover most needs in developing scientific processing workflows.

ObsPy extends Python's capabilities to fit the specific needs that arise when working with seismological data. It a) comes with a continuously growing signal processing toolbox that covers most tasks common in seismological analysis, b) provides read and write support for many common waveform, station and event metadata formats and c) enables access to various data centers, webservices and databases to retrieve waveform data and station/event metadata.

In combination with mature and free Python packages like NumPy, SciPy, Matplotlib, IPython and PyQt, ObsPy makes it possible to develop complete workflows in Python, ranging from reading locally stored data or requesting data from one or more different data centers via signal analysis and data processing to visualization in GUI and web applications, output of modified/derived data and the creation of publication-quality figures.

All functionality is extensively documented and the ObsPy Tutorial and Gallery give a good impression of the wide range of possible use cases. ObsPy is tested and running on Linux, OS X and Windows and comes with installation routines for these systems. ObsPy is developed in a test-driven approach and is available under the GPL/LGPLv3 open source licences.

Users are welcome to request help, report bugs, propose enhancements or contribute code via either the user mailing list or the project page on GitHub.