Appendix F

Dataless to Islola-pz

This algorithm can be used to automatically obtain the two input parameters for ISOLA software: waveforms in SAC format and station pz-files with instruments response. The code is developed in a form of a function that can be easily imported and used. The code takes the waveforms (usually in seed, mini-seed or any format that can be read by Obspy) and converts the waveforms to SAC. It also retrieves the instrument response from an input dataless or an online repository (using the ArcLink/WebDC data request protocol client for ObsPy – https://docs.obspy.org/packages/obspy.clients.arclink.html?highlight=arclink#module-obspy.clients.arclink). It saves the waveforms and pz-files in a local directories ("wav_name/SAC" and "wav_name/pzfiles", respectively).

Source code:

https://github.com/veronica-antunes/PHD_GGB/blob/master/get_isolapz.py

Function:

get_isolapz(waveforms, dataless = None, download = False, server = 'GFZ', station_type='B')

Parameters:

waveforms: waveform name or waveform list (e.g., "waveforms*");

dataless (optional): dataless name or dataless list (e.g., "dataless*"). Default is None;

download (optional): True/False. If True, retrieves instrument response using the ArcLink/WebDC data request protocol client with ObsPy. Default is False;

server (optional): Server used for instrument response download. For more information see https://docs.obspy.org/packages/obspy.clients.arclink.html?highlight=arclink#module-obspy.clients.arclink. Default is 'GFZ';

station_type (optional): Type of station. For more information see Sokos and Zahradnik, 2008 and Zahradník and Sokos, 2018. Default is 'B' for broadband station;

Necessary Packages:

- Obspy;
- Glob;