

Pycorr : an efficient tool to compute noise correlations

Laurent Stehly and Pierre Boué
Institut des Sciences de la Terre, Grenoble

We present pycorr, which is an open source python toolbox to :

- 1) download data from IRIS/EIDA
- 2) pre-process the data before computing the correlations
- 3) compute correlations
- 4) visualize the results

We think that pycorr is particularly suitable for anyone wanting to use noise correlations for both tomography and monitoring studies. Each step of the proccesing can be done on an arbitrary number of cores, and all results are stored using the hdf5 fileformat : this implies that pycorr scales nicely from simple dataset that can be processed on laptop computer to large-dataset that are typically processed on large clusters.

We will present example of application at the global scale and regional scale.