OSP1 as an example:

1. Data\_load\_osp1 pandas

* Load the original txt files into \*.npz/ \*.pkl files;
* Transformation from raw data U, V, W (sensor local coordinate system, according to KVT server information) to global XYZ (X: to east, Y: to north, Z: to vertical).

1. Sonic\_data\_process ops1

* Process the data (npz files) into 1-hour sample and create the local U, uvw, dir and time for each 1 hour sample and then save into 1h data sample (npz file)

1. Sonic\_data\_process mean wind storm identification

* Identify the storm events based on top sensor at four masts and the reference location.

1. Storm\_data\_visualization\_new

* Plot the time history of each storm

1. Storm\_raw\_data\_generation\_pandas

* Raw data of each storm generation into \*.pkl files from monthly \*.pkl files

1. Storm\_raw\_data\_generation

* Raw data of each storm generation into \*.npz files from monthly \*.pkl files

1. Storm\_data\_hourly\_data\_generation

* Generate the storm data for the identified events into \*.pkl files (osp1 3h, 1h, 20mins, 10mins)

1. data\_analysis\_10Hz\_sf\_Osp1\_std\_measure w smooth

* spectra fitting for osp1

1. data\_analysis\_coherence\_fitting\_Osp1\_w smooth

* coherence fitting for osp1

1. Sonic\_data\_process mean wind storm identification\_langenuen

* Identify the storm events based on top sensor at four masts and the reference location.