

Manual V1.1

Here I intended to describe the parameters defined within the two main files.

1- Synthetic_Trainer

- Dep1, Dep2, Dep_S

These parameters control the minimum depth, maximum depth, and depth step to look for the hypocenter's depth (km).

- VelModel

Name of the user-defined velocity model.

- Center_Lon, Center_Lat, Radius

The program uses a square-shaped region to set up the grid points. The center to this region is (Center_Lon, Center_Lat) and Radius defines the edges of the region with respect to the center point (degree).

- Grid_Inc

This parameter defines the grids step and actually resolution of the final retrieved location. Smaller values for this parameter leads to a more time-consuming process (degree).

- PnPg_Th

This is the threshold of the station-epicenter distances to distinguish Pg from Pn.

2- Locate

- S12_TD

The program considers the P arrival differences between the first and second closest stations to the epicenter as a key parameter (Let's say X, calculated from the actual P arrivals). S12_TD is the maximum permissible difference between the actual and synthetic (retrieved from a grid point) values of X.

- Cr_Inc_Max

Keep it unchanged.

- deg

degree to kilometer.

- PnPg_Th

This is the threshold station to epicenter distance to distinguish Pg from Pn. Must be exactly equal to the one set in Synthetic_Trainer.