

Menu entry Min/Max? Pick

This is a simple phase picking algorithm for picking coherent phases on rather strong teleseismic events. The resulting phases are used for subsequent slowness/azimuth determinations (menu entry [Plane Wave](#)).

It is an alternative to pick coherent phases manually or to determine slowness and azimuth by menu entry [FK](#). The phases created by this procedure are named beam. These are pseudo-phases which are used for slowness determination only. They need not to mark the onset of a phase but only a coherent point on the waveform. The algorithm used here marks either a minimum for all traces or a maximum for all traces within a given time window. The following steps should be executed:

- Select an appropriate time window using the right mouse button and menu entry [Set Time Window](#) so that you have a reasonable resolution in time in the main display window.
- Choose a reference trace (which can be any trace on display) and drag a time window on it (with the right mouse button). The minimum/maximum search on all traces will be restricted to this time window.
- Select the menu entry *Min/Max? Pick*.

The algorithm first scans the reference trace for the minimum and maximum within the specified time window. It takes the extremum with the larger absolute values if it's position is not at the boundary of the time window and marks it.

Then it searches all other traces for the same extremum (minimum or maximum) and marks it if it is not at the time window boundary. This operation may be repeated arbitrarily.

Already existing beam-phases are deleted before executing this procedure. It also may be iterated in combination with the [Beam](#) command which performs alignment of coherent phases.

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