

# Manual Phase Picking

- Input
  - fctlg: catalog file, just rough location would be enough
  - fsta: station file for predicting P & S arrival times
  - data\_dir: directory of continuous waveform
- Output
  - fpha\_hyp: manually picked and located phase file

Input	Operation	Output	<i>Notes</i>
fctlg & fsta	<i>ctlg2pha.py</i>	fpha_org	predicted phase arrival
fpha_org	<i>cut_events.py</i>	events/[event_name] /[net.sta.chn]	
	SAC <i>ppk</i> P/S/N in t0/1/2		only use <i>wh</i>
events & fpha_org	<i>head2pha.py</i>	fpha_man	only phase lines change
fpha_man	<i>cut_events.py</i>	events/[event_name] /[net.sta.chn]	may repeat the manual picking process
fpha_man	event location	fpha_hyp	use Hypo-Interface-Py