

1) Build event-pair table

dt.ct

(event-pair provided by ph2dt)

IF pick available

Yes

No

hypoDD.pha
(travel-time)

Practical travel-time

event.sel
(event information)

station.sel
(station information)

ttddb.txt
(travel-time table)

Theoretical travel-time

Event-pair table

(including travel-time of common station)

2) Build waveform database

P wave

wb

wa

Z component

N component

E component

S wave

wbs

was

IF $wa > 0.9 \cdot (S-P) / wbs > 0.5 \cdot (S-P)$

Yes ->

$wa = 0.9 \cdot (S-P) / wbs = 0.5 \cdot (S-P)$

No -> pass

Waveform database

3) Build dt.cc

Preprocess

1 -> rmean

2 -> taper

3 -> filter

IF SNR > threshold
(e.g., 5)

Yes -> keep

No -> remove

Cross-correlation (CC)

IF CC value > threshold
(e.g., 0.7)

Yes -> keep

No -> remove

Output dt.cc

FDTCC