





































Summary Direct extrapolation of the early observed wavefields (records)
Since apparent velocity and propagation direction are estimated with a dense network, spatial derivatives of waveforms should be introduced.
(1) Resolution and stability improved even with non-uniform and sparse distribution of stations
(2) Green's function propagating on a surface with reasonable velocity required, depending on regional, focal depth and distance
With the current Hi-net/JMA network in Japan (3) Velocity and propagation direction can be well estimated by <i>f-k</i> array analysis, including the image of a spreading wave fronts near an epicenter (< 100km with the use of 0.3-5Hz records)
Not presented due to the limited time: Future perspectives
(4) site-correction to enhance correlations among records(5) anisotropic behaviors of "a zone of abnormal seismic intensity"
P-wave data alone can only estimate P- but not S-wavefields.

