W-phase analysis and fault parameter estimation by using high-sampling-rate(1Hz) GNSS data (for the case of the 2003 Tokachi-Oki earthquake)

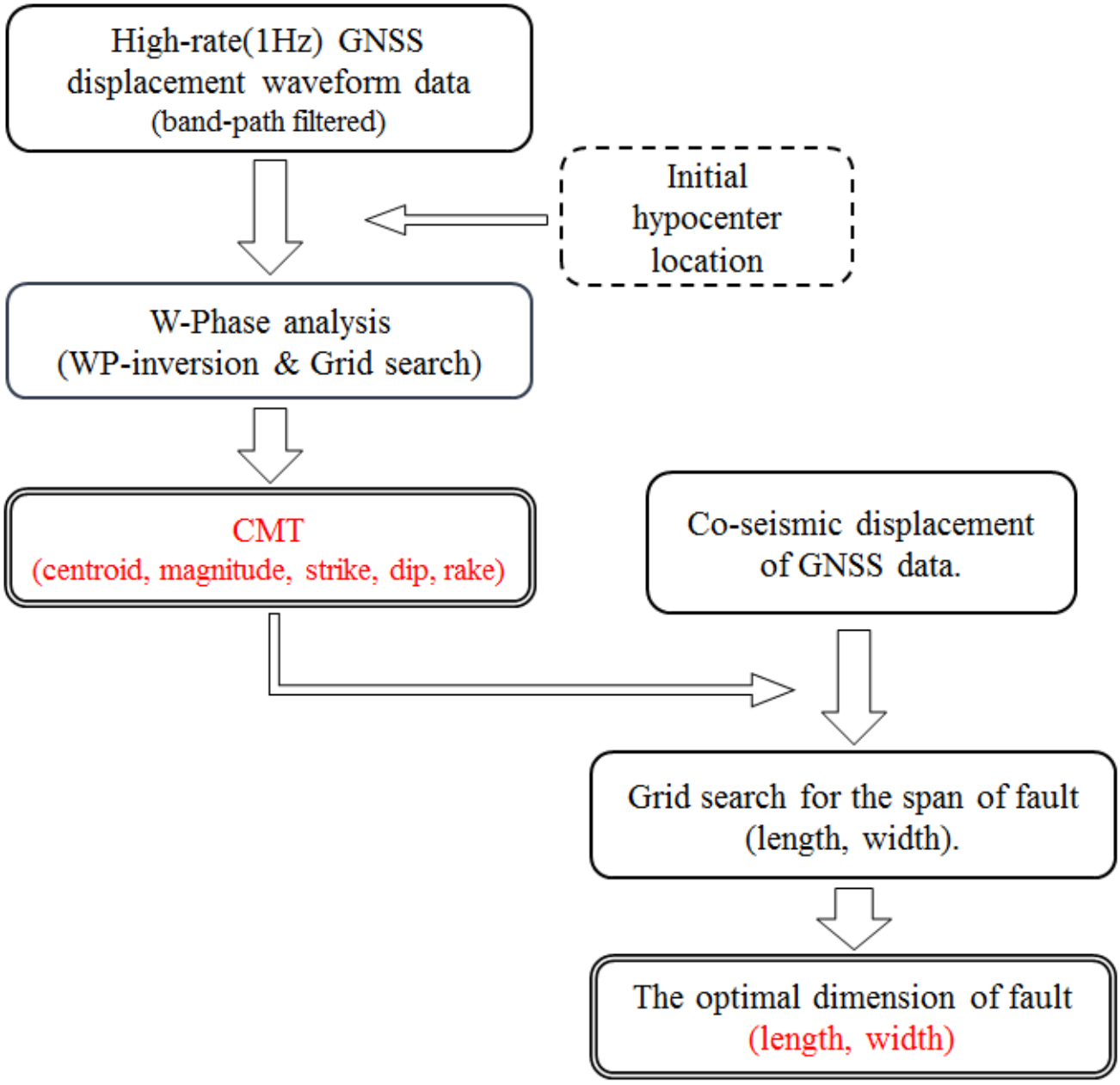
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JMA has been issuing tsunami warning immediately, in about three minutes, when a large earthquake occurs in coastal regions of Japan. This initial warning is based on only the information of the hypocenter and the magnitude. Therefore, detailed analysis, such as a centroid moment tensor solution, are needed to update the warning.
Ueno et al. (2014) tried w-phase analysis for the 2011 Tohoku-Oki earthquakes (the main shock and the largest aftershock) using high-sampling-rate (1Hz) GNSS data. Furthermore, Miyaoka et al. (2014) tried to estimate length and width of the fault using the coseismic crustal deformation data observed at each GNSS sites based on the result of the w-phase analysis described above.
These study showed a possibility to obtain the CMT solution and the fault size in six or seven minutes after the event occurrence and pointed out the necessity to analyse other cases.
In this study, we applied these analyses to a case of the 2003 Tokachi-Oki earthquake. We would like to show the result of the analysis.

Keywords: W-phase, GNSS 1Hz data, 2011 Tohoku-Oki earthquake, 2003 Tokachi-Oki eqrthquake

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