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Present research status and foresight on timely cancelation of tsunami warning

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This presentation reviews researches related to cancelation of tsunami warnings, and then says future prospects toward realizing timely cancelation of tsunami warning. Timely cancelation of tsunami warning is one of the important issues on tsunami information services by Japan Meteorological Agency, because disaster mitigation related organs have strong needs on it. Especially, in case of a far-field tsunami, which in general continues longer than a near-field tsunami, timing of cancelation of tsunami warning becomes crucial. Present research status on timely cancelation of tsunami warning can be summarized that there are strong needs and poor technical seeds. Tsunami forecast based on pre-calculated scenario tsunami database involves difficulties in improving forecasts related to phenomena or features which cannot be simulated well by numerical tsunami calculation. Deterministic prediction of tsunami waveforms many hours after arrival is an example of such disadvantage of scenario tsunami database. Recently developed measures for quantitative description of tsunami decay features, such as moving root mean squared amplitude, tsunami coda and non-dimensional tsunami amplitude, set the course for realizing timely cancelation of tsunami warning; that is to increase knowledge on decay feature of tsunami coda through analyzing various tsunami events by applying new measures. For this reason, archives of historical analogue tsunami records become more important.

Keywords: tsunami warning, cancelation of warning, tsunami decay process, tsunami coda