



Reply to: Comment by Rodrigo Cienfuegos on “Rapidly Estimated Seismic Source Parameters for the 16 September 2015 Illapel, Chile, Mw 8.3 Earthquake” by Lingling Ye, Thorne Lay, Hiroo Kanamori, and Keith D. Koper

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In his comment, Dr. Cienfuegos clarifies the specific protocol for tsunami hazard assessment followed by the Chilean National Emergency Office (ONEMI) and the National Hydrographic and Oceanographic Service of the Chilean Navy (SHOA) for the 16 September 2015 Tsunami Alarm bulletin issued 8 min after the earthquake nucleated. While he acknowledges that a regional W-phase inversion performed by the Chilean National Seismological Center of the University of Chile appears to have been provided within 5 min of the origin, and the result was presumably transmitted to the authorities as we report, this information was apparently not used in the decision-making process regarding the issuing of the Tsunami Alarm bulletin. While our

statement appears to be factually correct, to the best of our knowledge, any inference of cause and effect between the W-phase solution and the bulletin issued by ONEMI and SHOA appears to not be valid. It is often the case that protocols for emergency response decision-making lag behind the technological capabilities of the scientific community. Hopefully, the valuable W-phase information will be included in future protocols for decisions regarding Chilean tsunami.

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