グローバルＣＯＥ地球惑星科学
フロンティアセミナー

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日　時　：　2012 年 1 月 17 日(火)　10:00 – 12:00

場　所　：　地震・噴火予知研究観測センター　別館 第一会議室

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ELEVEN TSUNAMIS FROM SUMATRA TO TOHOKU: HAVE WE BECOME

講義内容：

The 2004 Sumatra earthquake was the biggest event in at least 40 years, and its tsunami probably the deadliest in the history of mankind. Six years later, the 2011 Tohoku earthquake and tsunami were the largest natural disaster in 115 years (and economically probably the largest ever), in Japan.

We examine the impact on these and others smaller tsunamis on our knowledge of Earth dynamics, on our approach to tsunami mitigation and warning and we review critically the performance and efficiency of warnings during the smaller tsunamis which have occurred since 2005. While awareness of tsunami hazard has undoubtedly been raised worldwide, and substantial funding appropriated, the development of tsunami centers and the improvement of warning algorithms remains occasionally chaotic, despite significant analytical progress, such as the generalization of W-phase inversions.

We review eleven post-Sumatra tsunamis (from Nias, 2005 to Tohoku, 2011) and assign them a color-coded wisdom index, on a scale from red (bad) to gold (excellent), depending on an [admittedly subjective] evaluation of the performance of mitigation efforts, of the warning centers and of the response of the populations involved. The results are mixed, with a generally positive attitude of coastal inhabitants possessing the reflex of self-evacuation, but a frequent failure of centralized warning centers and government agencies, which in particular, have repeatedly failed to mitigate against, and recognize in real time, the so-called "tsunami earthquakes" characterized by slow rupture and enhanced tsunami generation.

主　催　：　東北大学　グローバルCOEプログラム
『変動地球惑星学の統合教育研究拠点』
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