Numerical simulation of a volcanic submarine landslide-generated tsunami at Kick’em Jenny volcano: source and propagation.

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Abstract

Kick’em Jenny (KeJ) is the only active submarine volcano of the Lesser Antilles volcanic arc. It is located approximately 8 km north of Grenada island and is about -180 m below the sea level and it lies within a horseshoe-shaped structure (Figure 1). Dondin et al. (2012) have shown that KeJ undergone at least 3 sector collapse episode and the current visible horseshoe-shape structure is related to one of these episodes. Dondin et al. (2012) estimated the volume associated to this episode to be 4.4 km$^3$.

This presentation focuses on the results of numerical simulations of tsunami generation and propagation produced for this volcanic flank collapse episode. These results constitute a part of my PhD thesis.

Figure 1: 15 m resolution digital elevation model of Kick’em Jenny volcano and its associated deposits generated from the March 2003, bathymetric data collected during the University of the Seismic Research Unit - University of Rhodes Island - NOAA survey (Sheperd (2004))

References
