

Tsunami Waves Generated by Earthquakes and Landslides: Computed by Means of Numerical Simulations in the Western Black Sea

In this work we present numerical simulations of tsunami waves generated by earthquakes and landslides in the region of the western Black Sea. We take into account three main seismic sources (two of them placed near the northern coast of Bulgaria and one near the northwestern Turkish Black Sea coast), and two hypothetical landslides (one subaerial and one underwater). The motion of the sliding body is computed by means of the code UBO-BLOCK1 based on a Lagrangian approach while the propagation of the tsunami waves is simulated through the numerical code UBO-TSUFDF. The tsunami is computed on three different grids – one for the whole area of the Black Sea (resolution 500 m), and two smaller grids (resolution 100 m) placed near the northern Bulgarian coast (Cape Kaliakra-Kavarna) and near the Turkish Black Sea coast (Zonguldak-Amasra).

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