

USE OF BLACK SEA LEVEL REGISTRATION DATA FOR TSUNAMI RESEARCH

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Abstract

Sea level observations provide information on physical processes occurring at different temporal and spatial scales, leading to emergencies in the coastal zone, such as floods, landslides and others. Among the data sources for tsunami research, the most common are continuous observations of sea-level variations recorded by tide gauge stations built along the coast. Continuous recordings from tide gauge stations located along the Black Sea coast are the only instrumental data for recording tsunami waves over the past century. The report briefly examines the sources of tsunami waves and records such events in the Black Sea region due to various sources. An example of a meteorological tsunami registered at the end of June 2014 is presented, including from the geodetic tide gauge stations in Varna and Burgas, which affects several southern European countries from Spain to Ukraine. The registrations at sea level were analyzed with meteorological data from synoptic weather stations located on the Bulgarian coast. The need for continuous observations at the Black Sea level, indispensable for multidisciplinary research and many engineering applications in the coastal zone, is justified.

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