



## **6 October 1944 Ayvacik earthquake and associated tsunami; Gulf of Edremit, Turkey**

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The marine region between the Midilli Island and the Gulf of Edremit is one of the tectonically active areas in the northern Aegean Sea. The earthquakes occurred in 231 (BC), 1383, 1636, 1672, 1754, 1755, 1845, 1865, 1867, 1874, 1880, 1886, 1887, 1889, 1890, 1891, 1901, 1914, 1916, 1917, 1920, 1925, 1930, 6.10.1944, 19.3.1953, 17.5.1954, 4.11.1954 and 19.11.1959 are documented in historical archives and by instrumental data. Among them, the event occurred on October 6th, 1944 (02:34:48.7, MS= 6.8) was felt within a radius of only 200 km (Akhisar, Manisa, Tekirdag, Gönen and Izmir) and largely affected the coastal areas of the Gulf of Edremit. This event, known as the Ayvacik Earthquake, caused serious damage over a large area between the towns of Ayvalik, Ayvacik, Burhaniye, Havran, Babakale and Foca with 30 casualties and 5500 damaged/destroyed houses. Many earth cracks and water gushes were reported. Coastal neighbourhoods in Ayvalik were flooded. Although no isoseismal map has been laid out, field researches indicate an epicentre in the sea. Depending on the distribution of cracks and heavy damage observed along the village of Kucukkuyu and the delta at the Ahmetce wharf, it should be somewhere offshore Kucukkuyu village. Shallow marine seismic profiles indicate normal-oblique faults close and subparallel to the northern coast of the gulf and also parallel to the present-day slip vectors. These faults possibly triggered the tsunami waves mostly observed at the eastern coasts of the gulf which should be considered in the tsunami catalogues.