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Tsunami Hazard Assessment in the Eastern Aegean Sea

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We present some preliminary results on tsunami hazard assessment for the City of Rhodes in the Eastern Aegean Sea. We use remote sensing data and methods to develop the maps, with topographic data derived using both satellite and aerial images. ASTER (Advanced Spaceborn Thermal Emission and Reflection Radiometer) stereo images were used to provide a Digital Elevation Model (DEM) for the whole island of Rhodes, whereas aerial imagery was used to derive a high resolution DEM for the City of Rhodes, which is located in the northern part of the island. These were merged with bathymetry data into a final DEM, from which raster ASCII nested grid files were extracted as input to the numerical tsunami propagation and inundation code MOST (Method of Spliting Tsunami). We present inundation maps for worst case scenarios that could affect the island of Rhodes. Some preliminary probabilistic inundation maps for 100 and 500 year recurrence periods are also presented.