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Earth free oscillation measurements with LCR-ET 26 spring gravimeter

Marcin Rajner and Jerzy Rogowski

Warsaw University of Technology, Department of Geodesy and Geodetic Astronomy, Warsaw, Poland (mrajner@gik.pw.edu.pl)

After strong earthquakes the Earth oscillates with spheroidal and toroidal modes. The former cause gravity changes which can be detected with sensitive instruments. For this purpose we used continuous gravity measurements with LaCoste&Romberg Earth Tide spring gravimeter from Józefosław Observatory near Warsaw. Spectral analyses of detided and depressured records show significant peaks in normal modes frequency range. This peaks are above noise level and are in good agreement with seismic theories. We show here some examples of normal modes registration after great earthquakes. Moreover improved signal to noise ratio from stacked spectra are presented. Some remarks concerning noise level in gravity measurements in Józefosław and data treatment are given. Importance of air pressure reduction is emphasized.