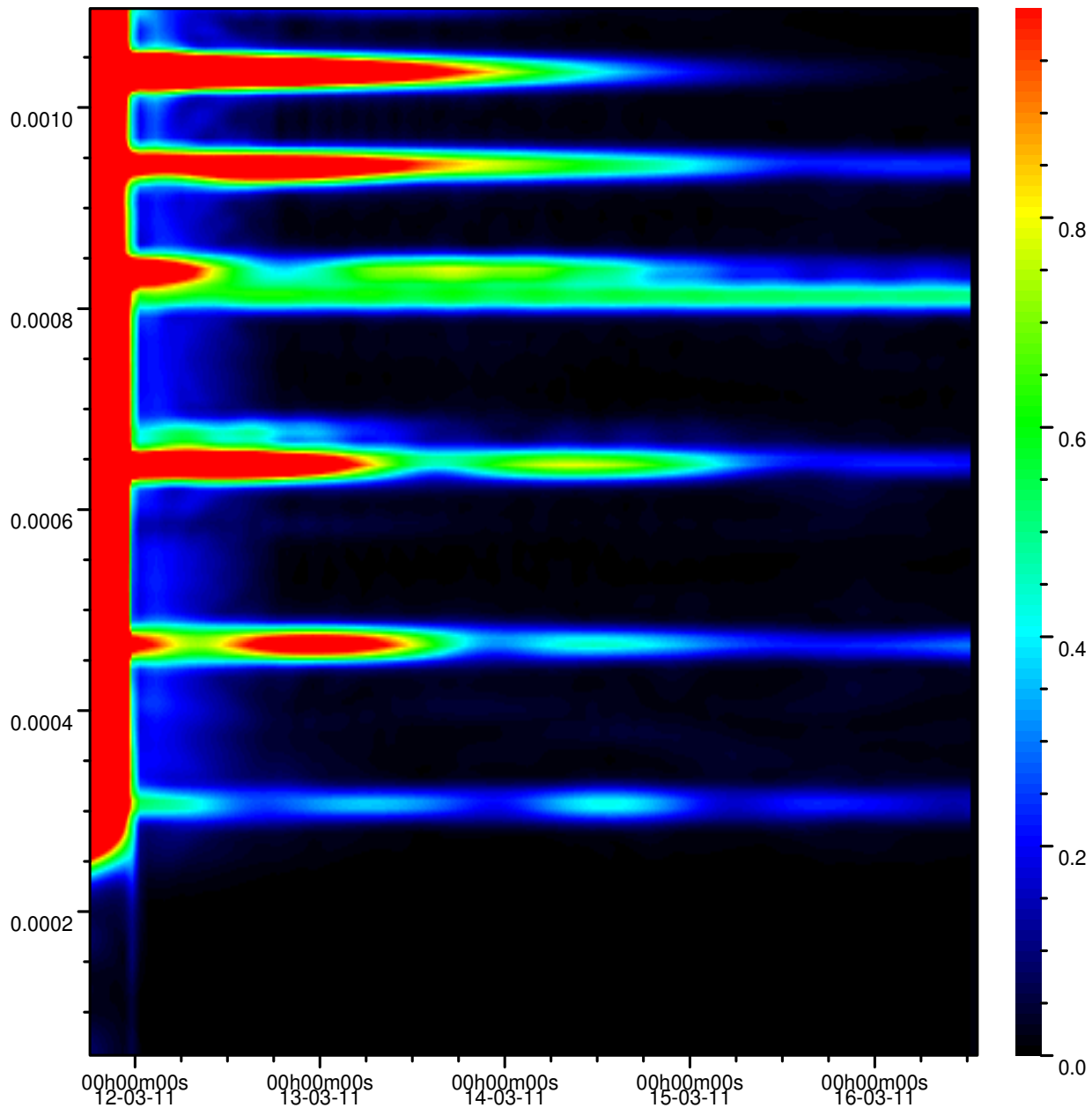
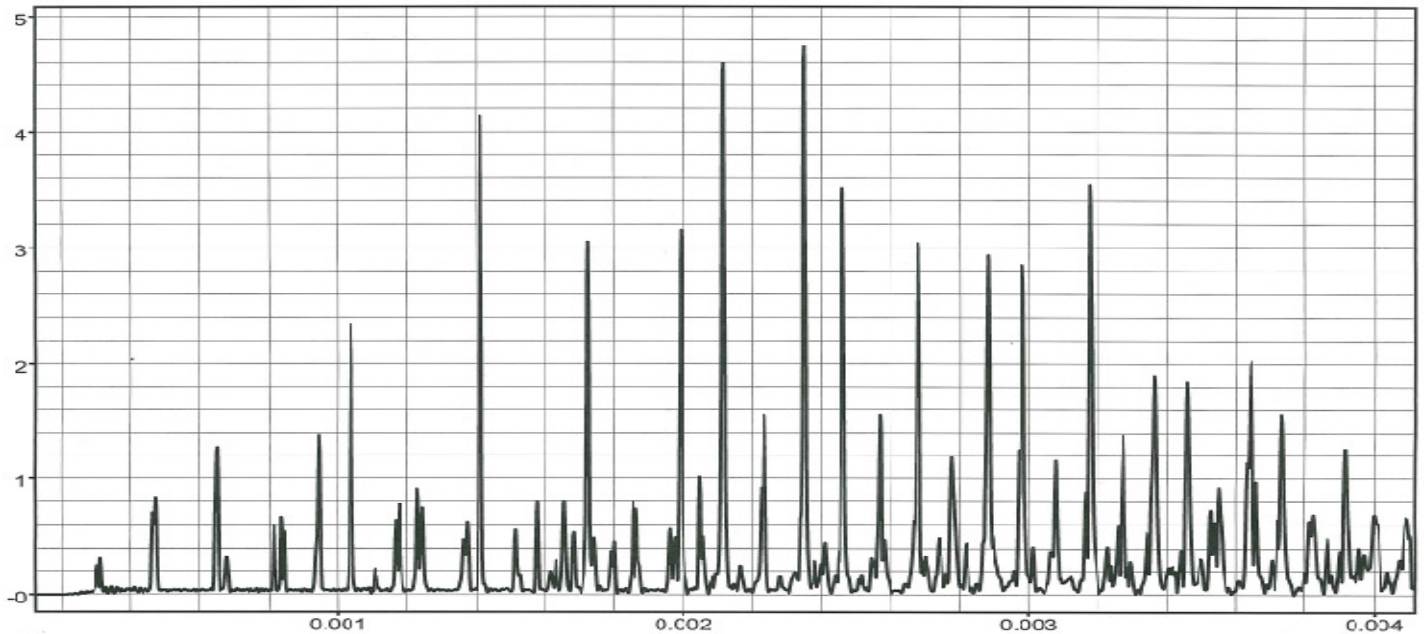


Japan earthquake 11.3.2011 (9.0Mw) excited free oscillation modes of the Earth. The superconducting gravimeter at Metsähovi works very well as a long-period seismometer.

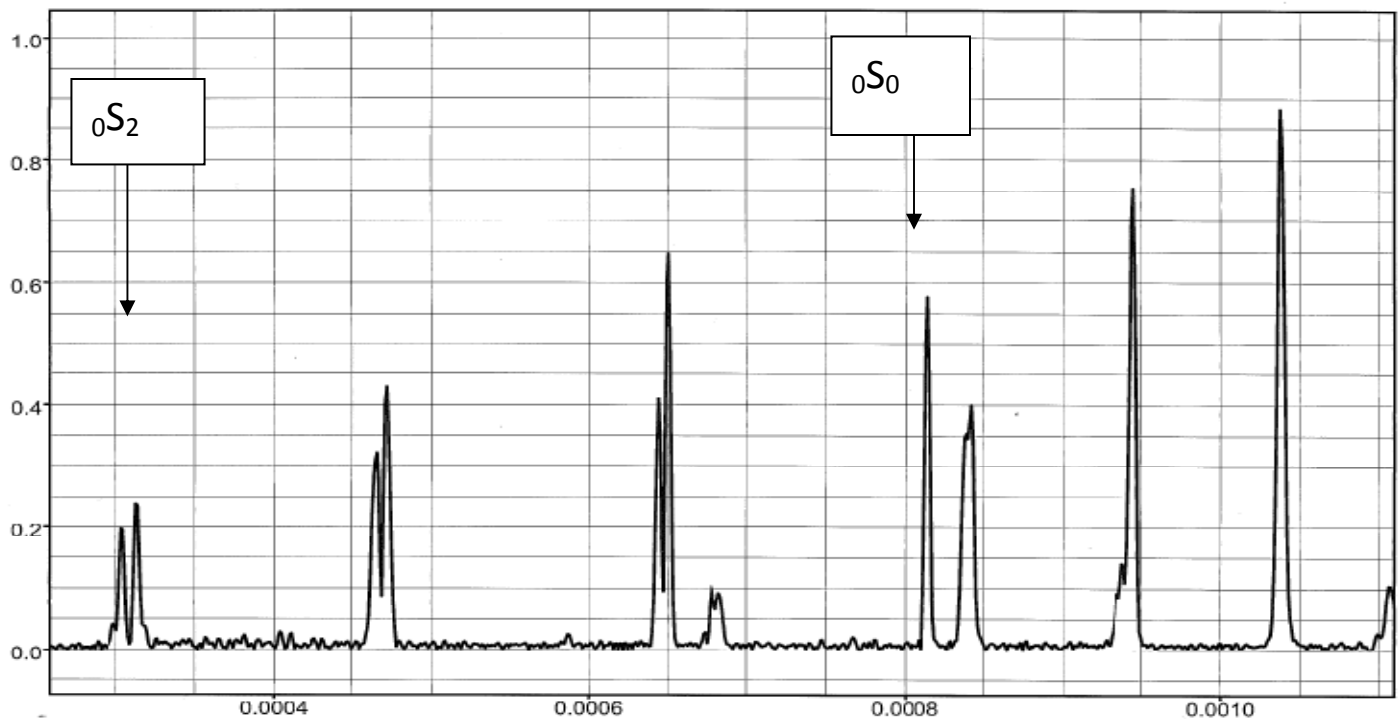


Moving window spectrum 11.3. – 17.3.2011 observed with the superconducting gravimeter at Metsähovi. X-axis is time, Y-axis is frequency (Hz). Intensity scale is from black to red. The gravity data is high-pass filtered (1-hour, or 0.000277 Hz)

OBSERVATIONS WITH THE SUPERCONDUCTING GRAVIMETER AT METSÄHOVI



Free oscillation modes of the Earth (144 hours), periods shown are from 1-hour to 4- minutes.



The lower part of spectrum. The lowest mode is spheroidal mode ${}_0S_2$ (54 minutes). All modes will decay in few days, except the lowest radial mode (${}_0S_0$). The expected life time will be 3-4 months. The radial oscillation mode changes radius of the Earth with the period of 20 minutes. The observed amplitude at Metsähovi is 0.06 mm on 17.3.2011.