APPLICATION OF CODA WAVE ANALYSIS TO ANALOG DATA OF WWSSN ATH STATION

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Seismic waves attenuation was measured in central Greece, around ATH station, from the time domain temporal decay of coda waves amplitude. Sato's (1978ab), single isotropic scattering model was adopted. Coda waves were considered as scattered body waves and elastic energy radiated spherically in the infinite elastic and isotropic medium. Energy density is proporsional to RMS value of velocity amplitude. In this study the method was oriented to overcame the inherrent difficulties which are present in the data on paper recorded.

A set of 65 local earthquakes wehe selected from WWSSN ATH station between 1982-1985, with epicentral distances sorter than 200 Km, and local magnitudes which range from 3.7.-5.2 Richter scale.

Each seismogram has been replaced by a series of pairs, amplitude and predominant period on a five sec interval centered at time t, middle of the time window considered, after earthquake origin time. A cumulative function of amplitudes, to obtain RMS was introduced, after 1.5ts the S-waves offset. Then the amplitude values have been converted into velocity one, by the mean of the instrument response curve. Thus the values obtained in this way constitute amplitudes used for this analysis.

Although the proposed data analysis must be considered as a rough approximation because of the difficulties on reading the paper charts, which leads on measurement error; our results confirm its utility for dealing with paper recorded data.

The value of Q^{-1} were estimated to be $5.5 \times 10^{-3} \pm 1.3 \times 10^{-2}$ at 1 Hz. This value agrees well with those obtained at several seismic active places, in the world. We can also point out that, if we suggest that coda Qc coincide with Q of S-waves, as many researchers suggested, then Q agrees also well with mean free path value obtained by the authors for the same region using the same data set.   .