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This program accepts seismic noise specifications in all kind of standard and non-standard units and compares them to the USGS New Low Noise Model NLNM (Jon Peterson 1993, USGS Open File Report 93-322).

The program is interactive and self-explaining. It will ask you some multiple-choice questions about your noise data, then propose the correct physical units, and upon confirmation will ask for data, to be entered as a pair (frequency, amplitude) or whatever is appropriate. Note that the Fortran and Basic versions require the pair to be separated by a comma while the C version requires a space as a separator. The program will stop when the pair 0, 0 is entered.

For each data point entered, the program will write on the screen:

LNM: the noise level of the NLNM in the units of your data
LNM pd: the noise level of the NLNM in decibels re. $(1 \text{ m/s}^2)^2 / \text{Hz}$
your pd: your data converted to decibels re. $(1 \text{ m/s}^2)^2 / \text{Hz}$
LNM amp: Noise amplitudes of the NLNM in dB re.1 m/s^2 rms amplitude in 1/6 decade, which is nearly the same as 1 m/s^2 average peak amplitude in 1/3 octave
your amp: your data converted to dB re.1 m/s^2 rms amplitude in 1/6 decade
diff: the level of your data relative to the NLNM in decibels

Download

A Windows executable and source codes in Basic, Fortran, and C are available by anonymous ftp from:
ftp.geophys.uni-stuttgart.de/pub/ew/noisecon