



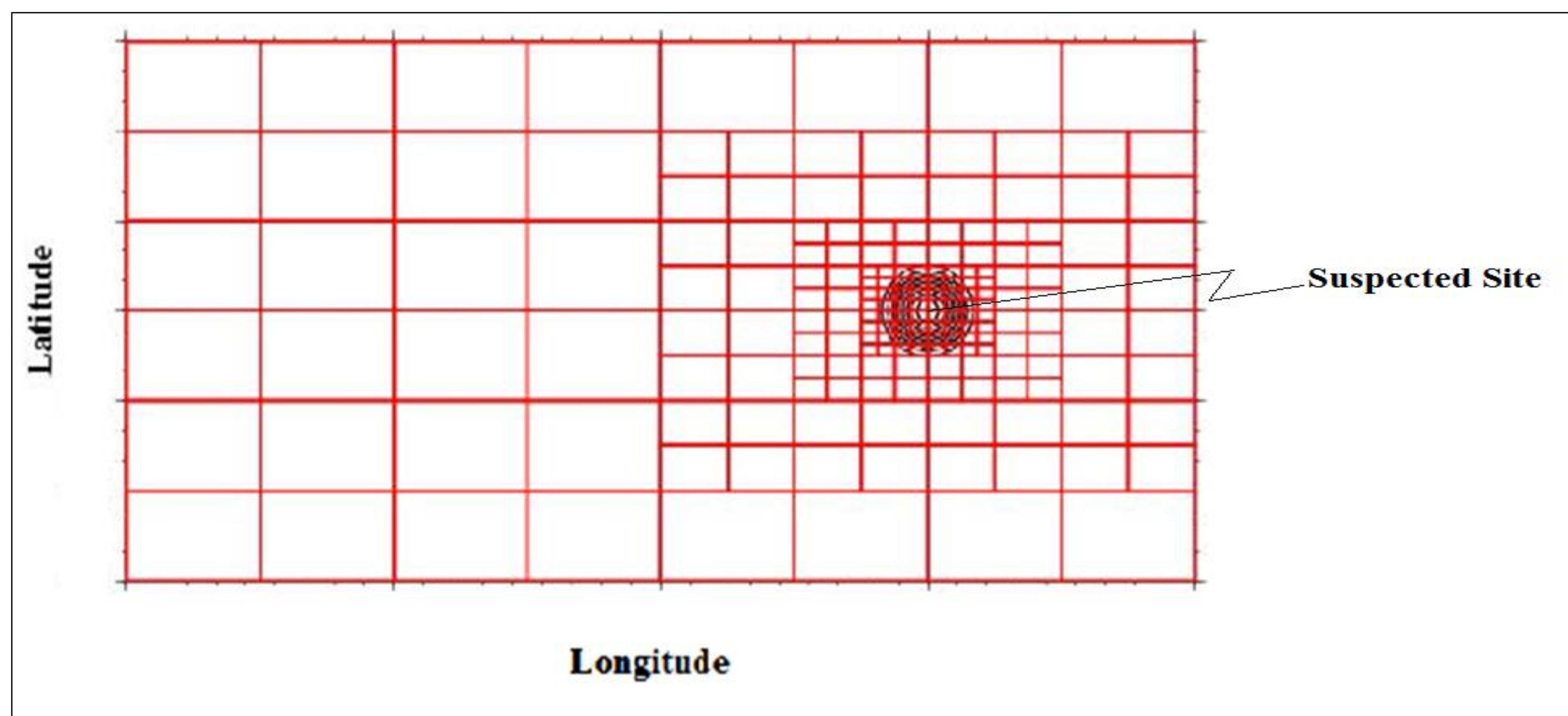
### Introduction

Microtremor are continued vibrations of the ground having small amplitudes in the range of 0.1 to 1 micron. Their origin is related to natural and artificial disturbances such as wind, sea waves, traffic industrial noise, and similar causes. Observation of microtremors can give useful information on dynamic properties of the site such as predominant period and amplitude. By taking advantage of the change (Anomaly) in the dominant frequency measurements at the site of study, it is possible to develop a probability of identifying the area, where a nuclear test might occur. Microtremor observations are easy to perform, and inexpensive method.

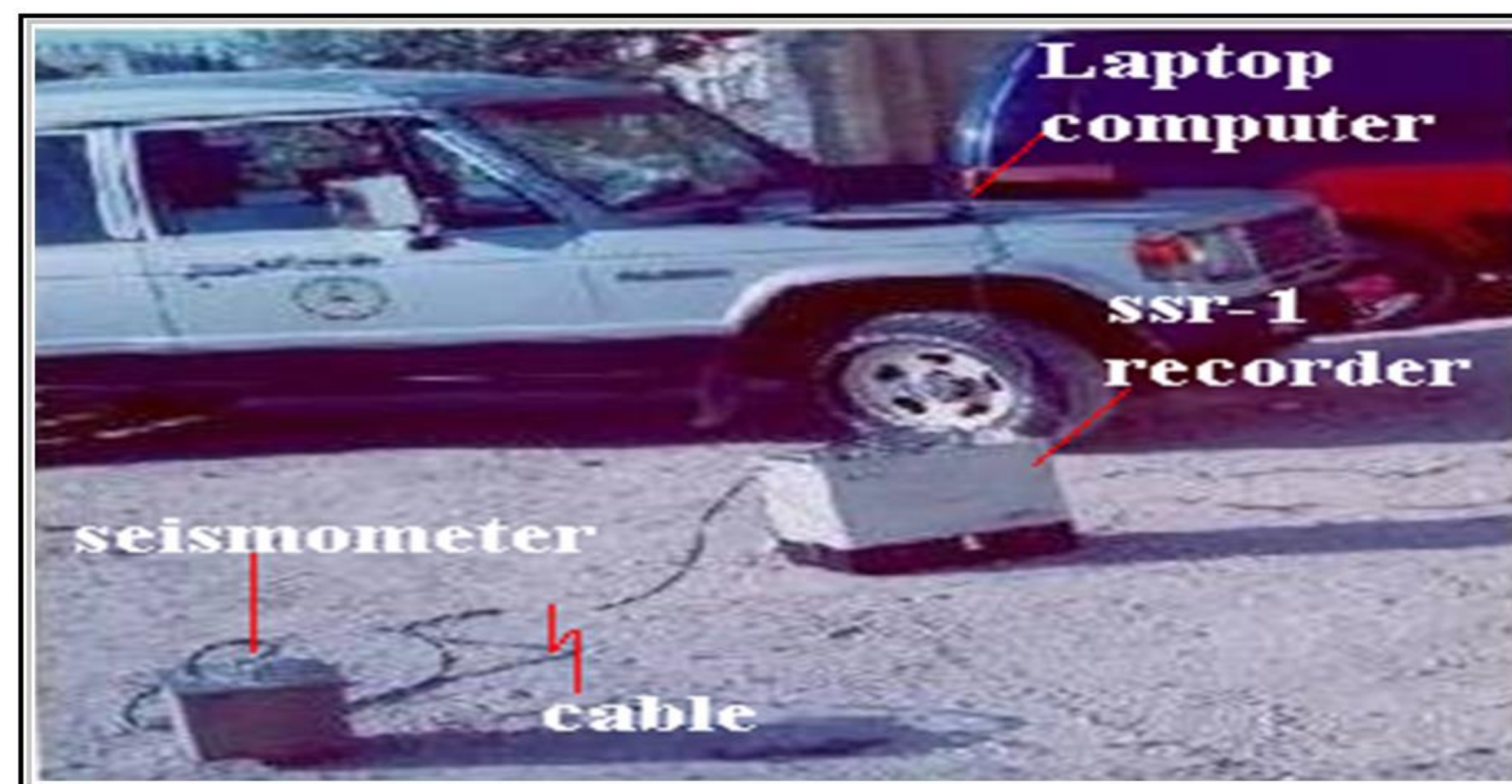


Some Microtremor Resources

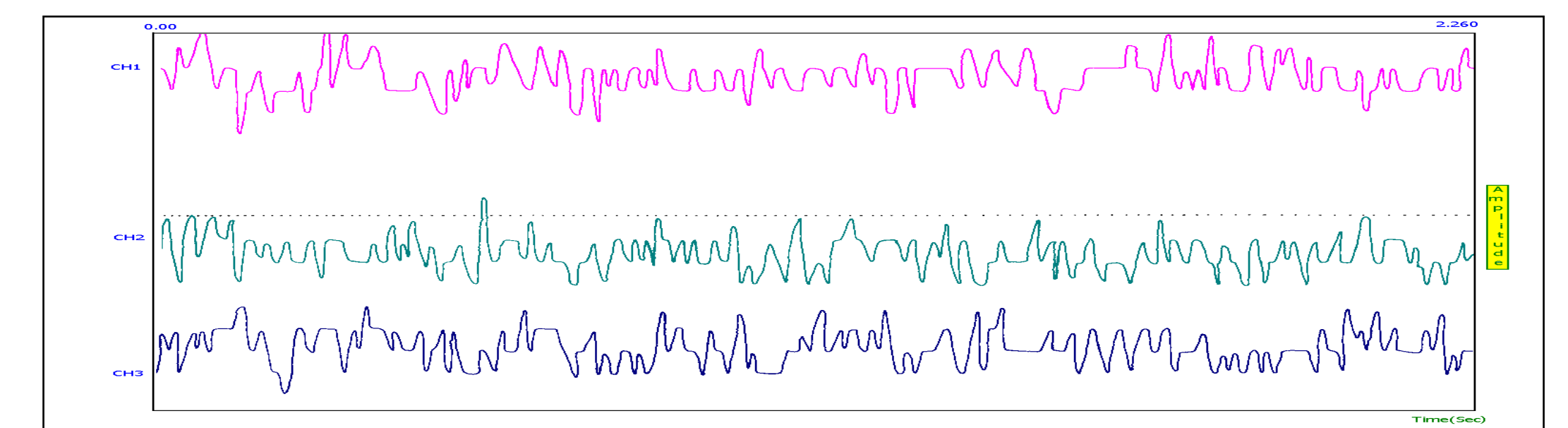
The site response is obtained in terms of spectral ratio calculated by dividing the horizontal versus to the vertical components of motion observed at the same site, in addition to resonance frequency. The obtained results support the application of horizontal-to-vertical spectral ratios, using ambient noise measurements,



Latitude/ Longitude grid lines on map

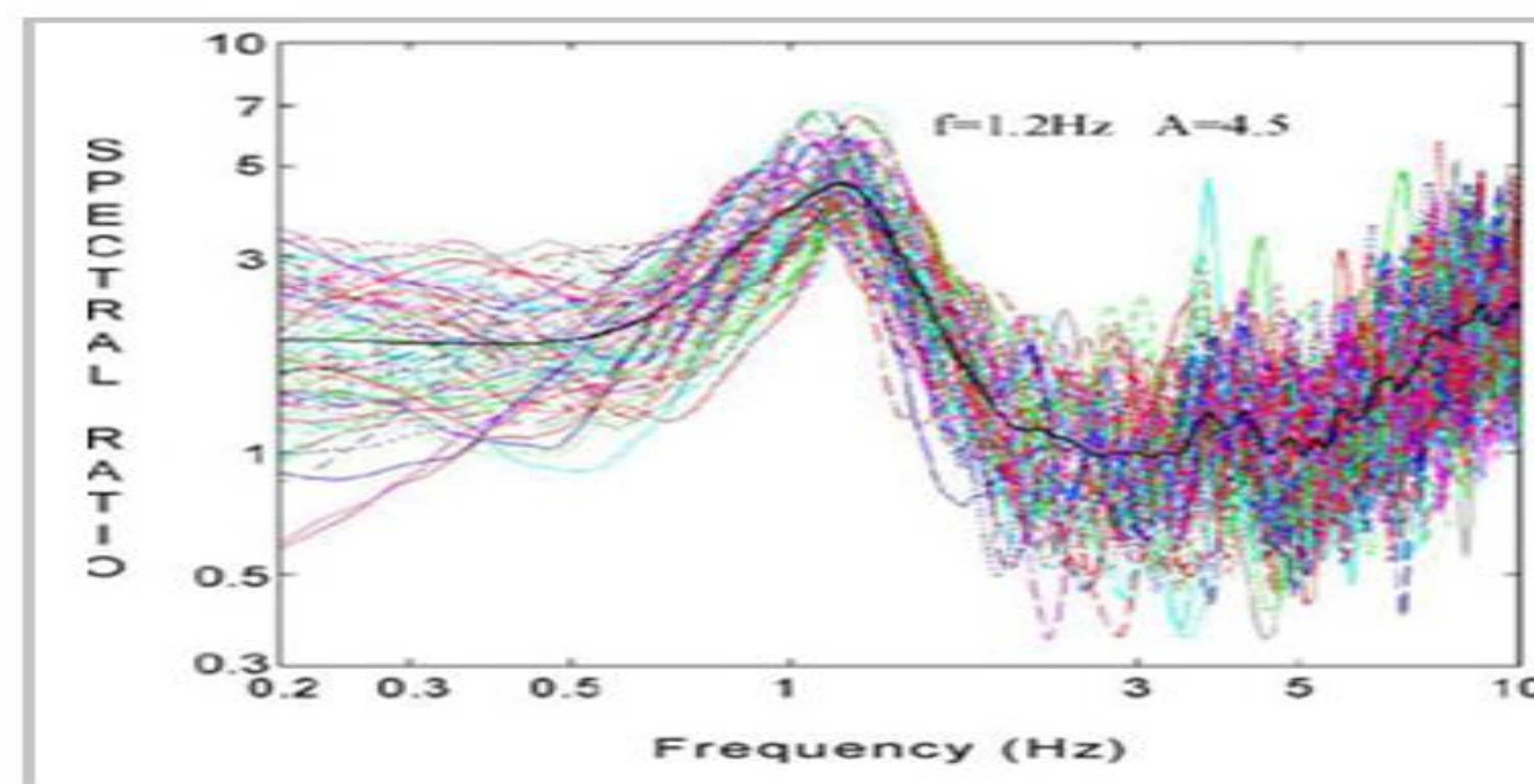


Instruments

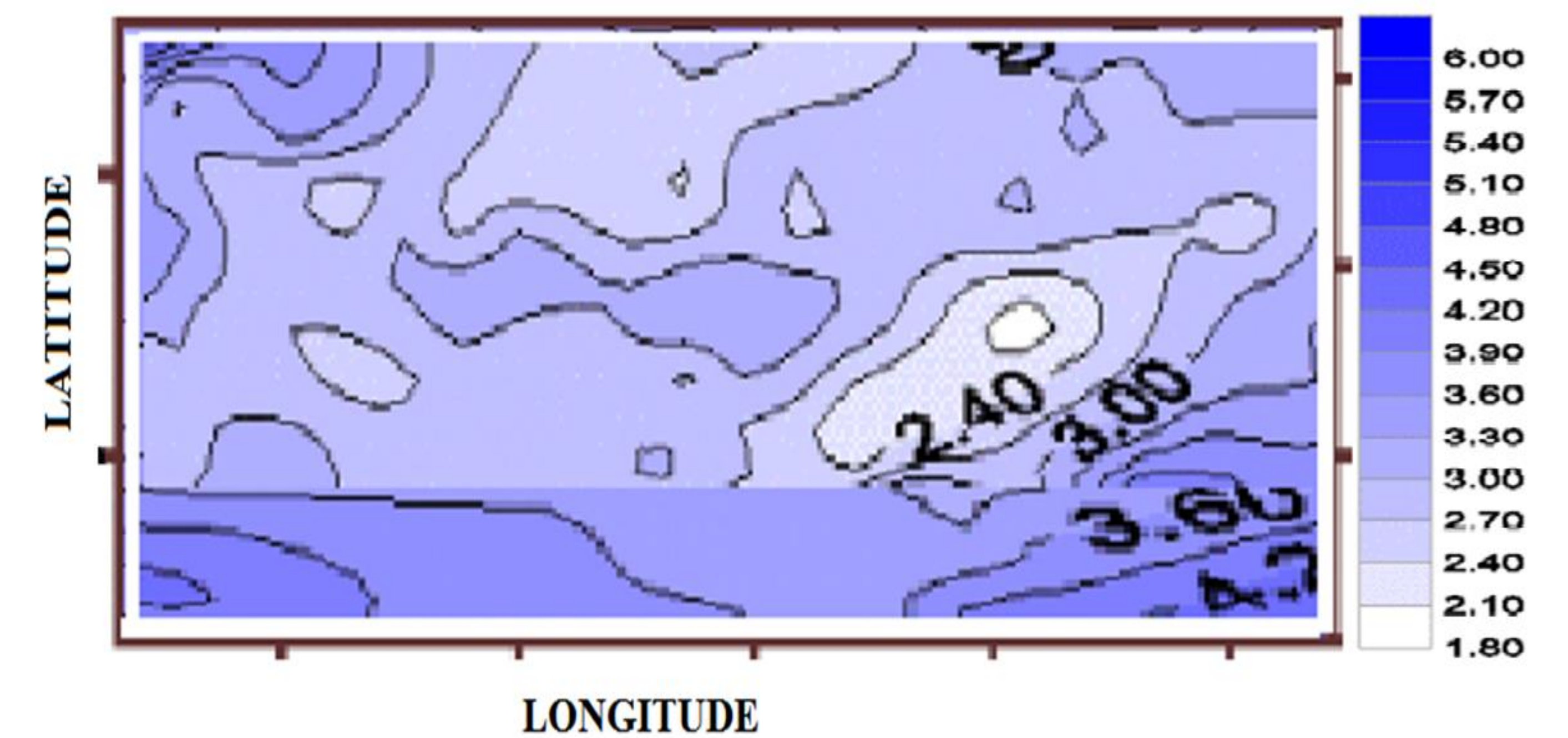


One of recorded microtremor signal (three components)

The spectra of an EW and NS channel at a site were divided by the spectra of the vertical channel at the same site.



Individual and average (black line) H/V spectral ratios for reference Points (Dr. Y. Zaslavsky,2002)



Contour maps showing distribution of fundamental frequency