

## PASSIVE SEISMIC STRATIGRAPHY IN THE PONTINA PLAIN (LATIUM, ITALY): FIRST DATA

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ABSTRACT: Catalano G. *et al.*, *Passive seismic stratigraphy in the Pontina Plain (Latium, Italy): first data.* (IT ISSN 0394-3356, 2011)

The Department of Soil Protection of the Lazio Region is using passive seismic stratigraphy (H/V signal methodology) in Pontina Plain, in areas characterized by sink-Holes. The aim is to reconstruct the evolution of the carbonatic bedrock.

RIASSUNTO: Catalano G. *et al.*, *Misure di sismica passiva nella Pianura Pontina (Lazio, Italia): primi risultati.* (IT ISSN 0394-3356, 2011)

L'Area Difesa del Suolo della Regione Lazio sta effettuando misure di rumore tramite Tromino, in aree spesso interessate dal fenomeno sinkhole, confrontando i dati con le stratigrafie di sondaggi inseriti nel database regionale, per ricostruire l'andamento del substrato carbonatico.

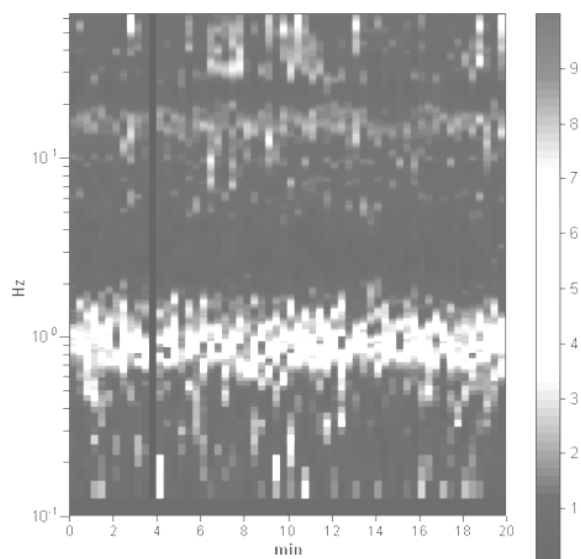
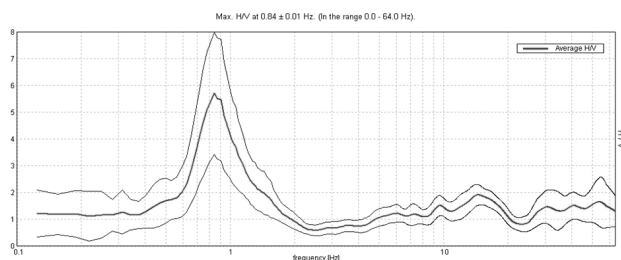
Key words: passive seismic, H/V, Pontina Plain

Parole chiave: sismica passiva, H/V, Pianura Pontina

The Department of Soil Protection of the Lazio Region has long been interested in improving the standards of land management through seismic and geological prevention. Since many years there are ongoing projects on seismic micro-zoning and sinkholes, both in well-defined areas that at a regional level. This also requires the constant acquisition of new data and the use of new technologies, to offer design enhancements.

Using the methodology H/V signals through the acquisition of noise (by TROMINO) is currently tested in a sample area of Lazio (the Pontine Plain) in order to reconstruct the carbonate basement.

There have been numerous measurements of noise in areas frequently affected by sinkhole phenomena by comparing the data with the known stratigraphic logs of the area (regional database). The measurements were made in area and along alignments.



The vertical and areal distribution of amplification peak vs frequencies has allowed the reconstruction of maps of distribution of frequencies and, by comparison with the stratigraphic logs, to reconstruct the evolution of the carbonate bedrock.

### REFERENCES

CASTELLANO S., MULARGIA F. & BIANCONI L. (2005) – *Passive Seismic Stratigraphy: A New Efficient, Economic Technique.* *Geologia Tecnica e Ambientale*, 5/2005, 76-102.