

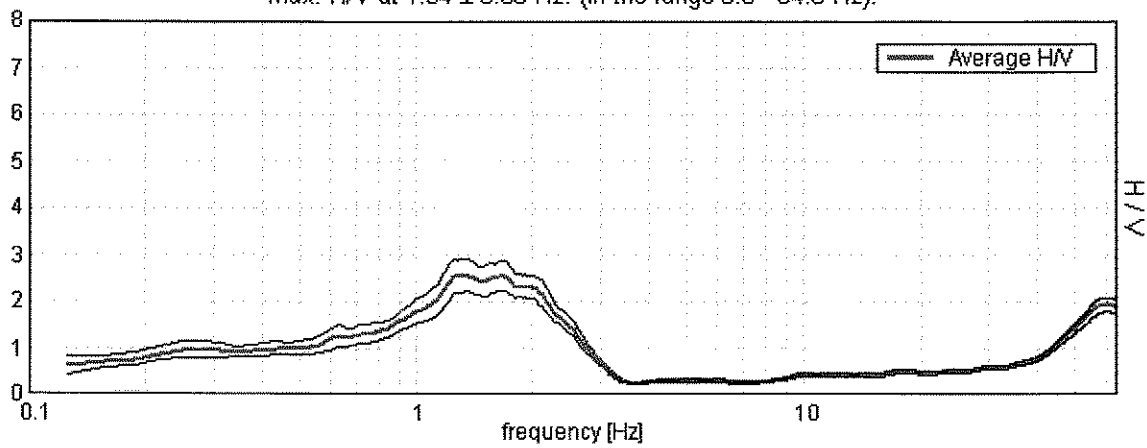


Comm: Detersan sas- Cant.: Via Valtiberina n°122 – Porto d'Ascoli - (AP)

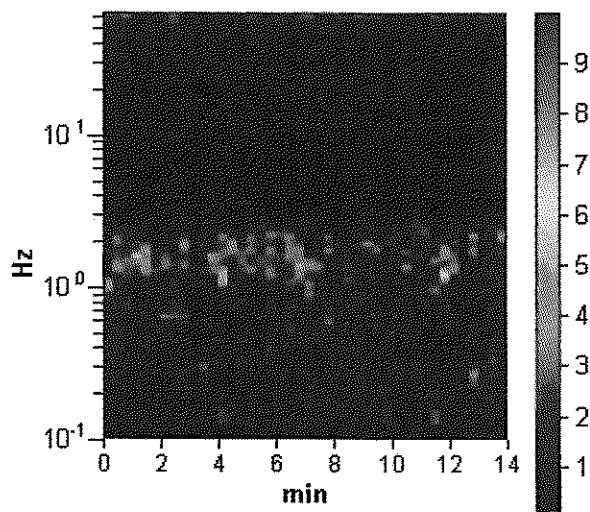
Start recording: 03/03/10 12:01:18 End recording: 03/03/10 12:15:19
 Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
 GPS location: 013°53.0601 E, 42°54.3033 N (16.7 m) Orient. Tromino: 350°N
 UTC time (synchronized to the first recording sample): not available in this acquisition mode + 0 samples
 Satellite no.: 04
 Trace length: 0h14'00". Analysis performed on the entire trace.
 Sampling frequency: 128 Hz
 Window size: 20 s
 Smoothing window: Triangular window
 Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

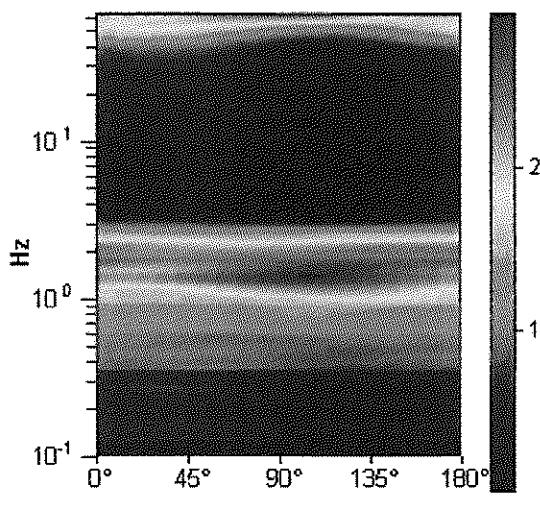
Max. H/V at 1.34 ± 0.03 Hz. (In the range 0.0 - 64.0 Hz).



H/V TIME HISTORY

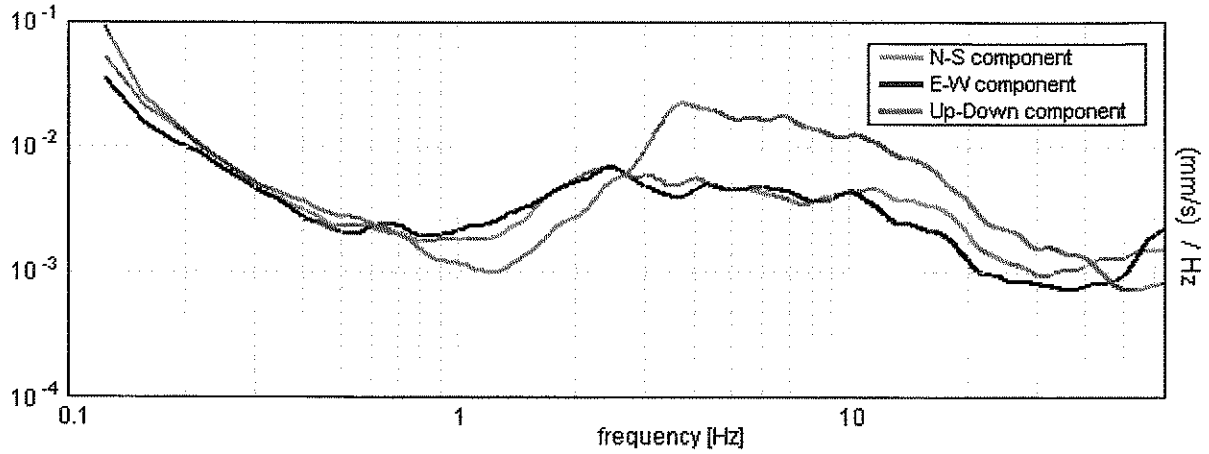


DIRECTIONAL H/V



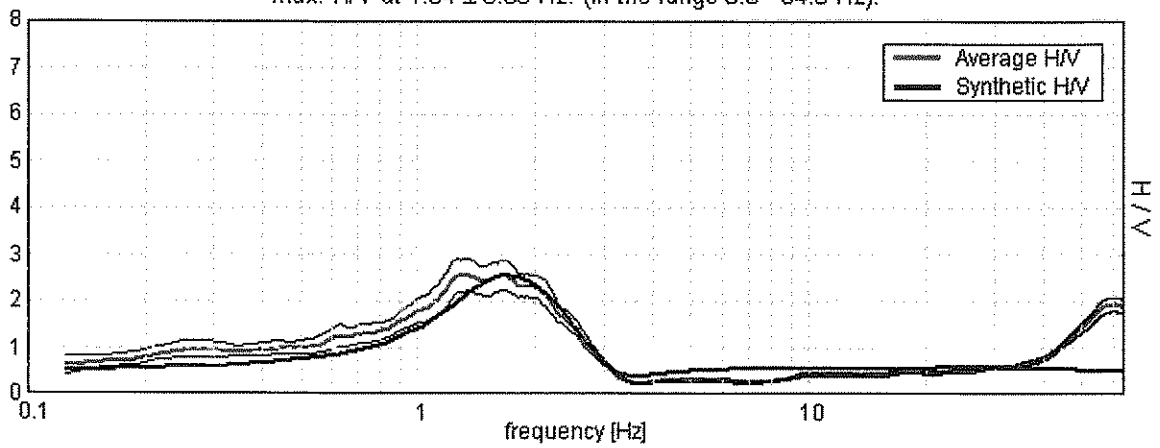


SINGLE COMPONENT SPECTRA



EXPERIMENTAL VS. SYNTHETIC H/V

Max. H/V at 1.34 ± 0.03 Hz. (In the range 0.0 - 64.0 Hz).



Depth at the bottom of the layer [m]	Thickness [m]	Vs [m/s]
0.90	0.90	150
20.90	20.00	180
45.90	25.00	380
70.90	25.00	400
inf.	inf.	500

Vs(0.0-30.0)=213m/s



[According to the Sesame, 2005 guidelines. Please read carefully the *Grilla* manual before interpreting the following tables.]

Max. H/V at 1.34 ± 0.03 Hz. (in the range 0.0 - 64.0 Hz).

Criteria for a reliable HVSR curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	1.34 > 0.50	OK	
$n_c(f_0) > 200$	1128.8 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$	Exceeded 0 out of 66 times	OK	

Criteria for a clear HVSR peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ $A_{H/V}(f^-) < A_0 / 2$	0.688 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ $A_{H/V}(f^+) < A_0 / 2$	2.625 Hz	OK	
$A_0 > 2$	2.56 > 2	OK	
$f_{\text{peak}} [A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$ 0.01049 < 0.05$	OK	
$\sigma_f < \varepsilon(f_0)$	0.0141 < 0.13438	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.1697 < 1.78	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{\log H/V}(f)$	standard deviation of $\log A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq.range [Hz]	< 0.2	0.2 - 0.5	0.5 - 1.0	1.0 - 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
Log $\theta(f_0)$ for $\sigma_{\log H/V}(f_0)$	0.48	0.40	0.30	0.25	0.20