

## POGGIO SAN VICINO 6, POGGIO SAN VICINO 6

Instrument: TE3-0060/01-14

Data format: 32 byte

Full scale [mV]: 51

Start recording: 04/08/17 12:20:54 End recording: 04/08/17 12:40:54

Channel labels: NORTH SOUTH; EAST WEST; UP DOWN

GPS data not available

Trace length: 0h20'00". Analysis performed on the entire trace.

Sampling rate: 128 Hz

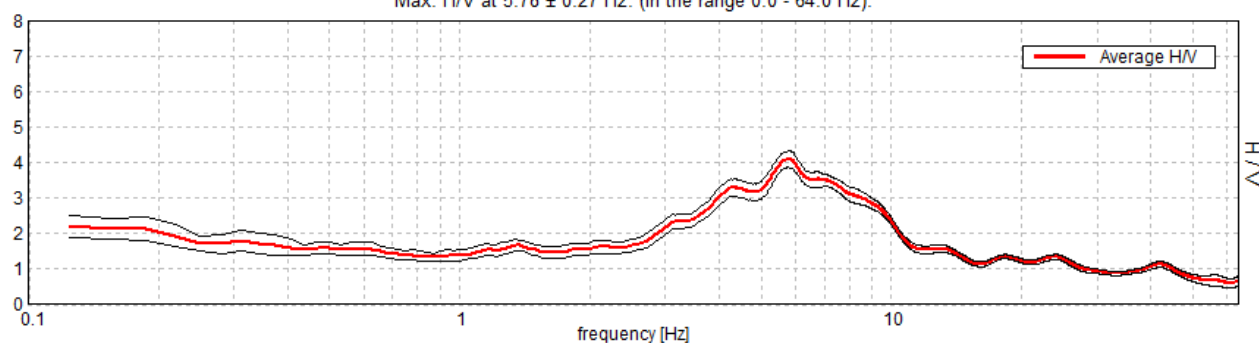
Window size: 20 s

Smoothing type: Triangular window

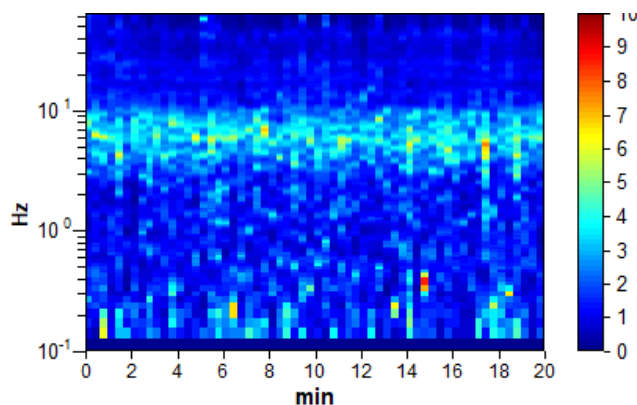
Smoothing: 10%

### HORIZONTAL TO VERTICAL SPECTRAL RATIO

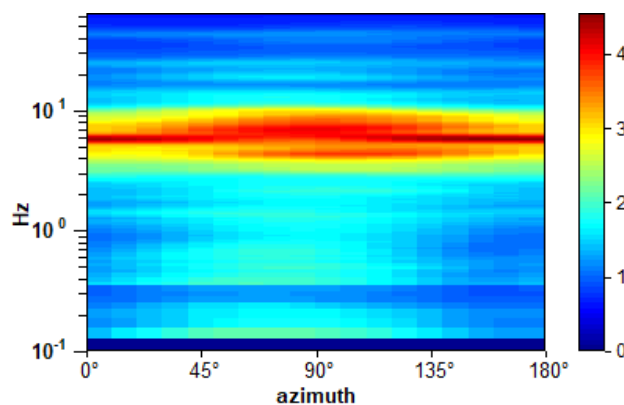
Max. H/V at  $5.78 \pm 0.27$  Hz. (In the range 0.0 - 64.0 Hz).



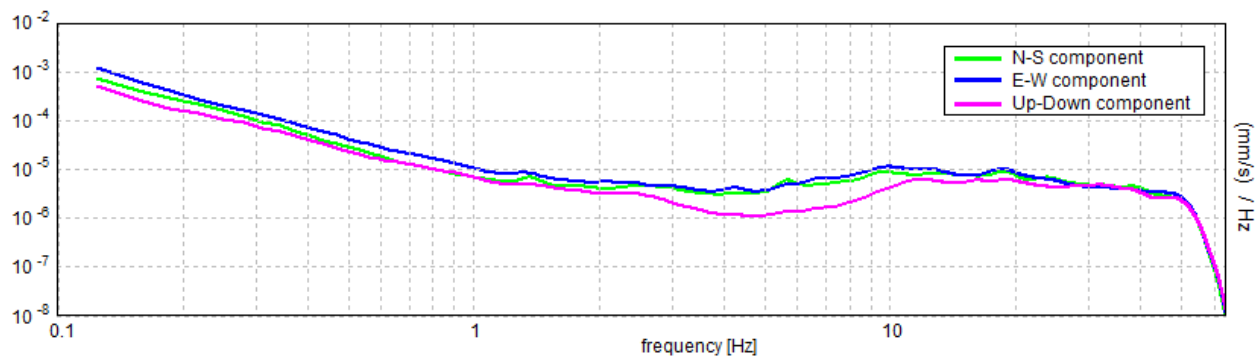
### H/V TIME HISTORY



### DIRECTIONAL H/V



### SINGLE COMPONENT SPECTRA



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

**Max. H/V at  $5.78 \pm 0.27$  Hz (in the range 0.0 - 64.0 Hz).**

**Criteria for a reliable H/V curve**

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$5.78 > 0.50$	OK	
$n_c(f_0) > 200$	$6937.5 > 200$	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 278 times	OK	

**Criteria for a clear H/V peak**

[At least 5 out of 6 should be fulfilled]

Exists $f^-$ in $[f_0/4, f_0]$   $A_{H/V}(f^-) < A_0 / 2$	2.875 Hz	OK	
Exists $f^+$ in $[f_0, 4f_0]$   $A_{H/V}(f^+) < A_0 / 2$	10.406 Hz	OK	
$A_0 > 2$	$4.09 > 2$	OK	
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$ 0.04739  < 0.05$	OK	
$\sigma_f < \varepsilon(f_0)$	$0.27398 < 0.28906$	OK	
$\sigma_A(f_0) < \theta(f_0)$	$0.2295 < 1.58$	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
$\sigma_f$	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  $\sigma_f$  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