

STATION INFORMATION

Station code: 3

Model: Geobox

Sensor: SARA SS45 (external 4.5 Hz sensors)

Notes: -

PLACE INFORMATION

Place ID: Scuola "Battisti"

Address: via San Martino - Monteverdi M.mo

Latitude: 43°10'40"

Longitude: 10°43'00"

Coordinate system: WGS84

Elevation: 380 m s.l.m.

Weather: Sereno

Notes: -

PHOTOGRAPHIC REFERENCES



SIGNAL AND WINDOWING

Sampling frequency: 200 Hz

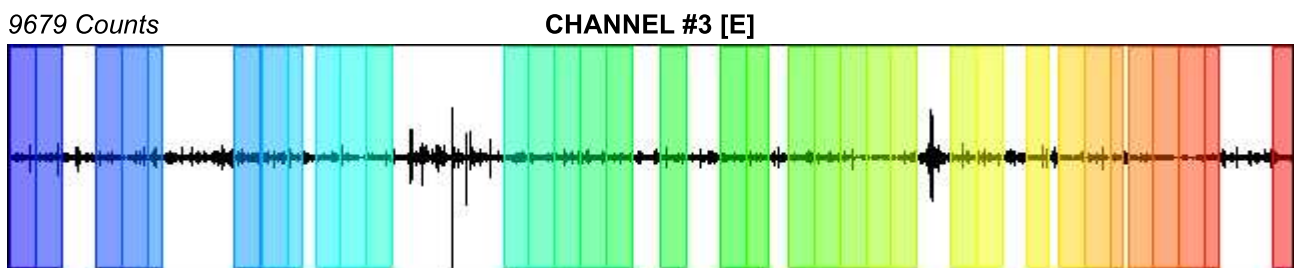
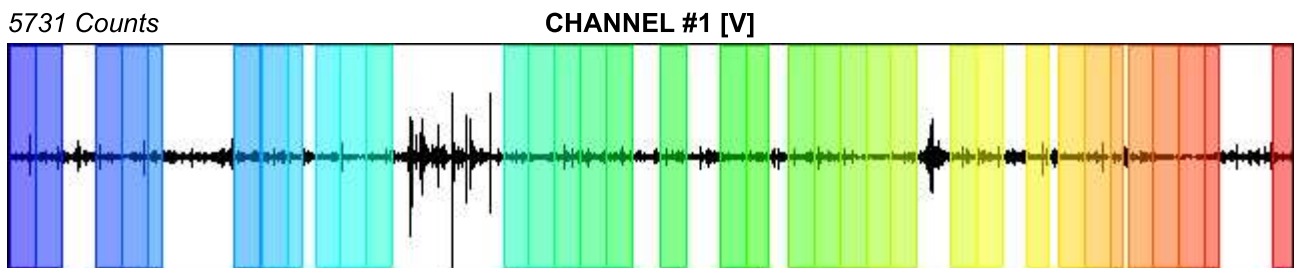
Recording start time: 2017/09/19 12:16:58

Recording length: 33.33 min

Windows count: 35

Average windows length: 37.45

Signal coverage: 65.53%



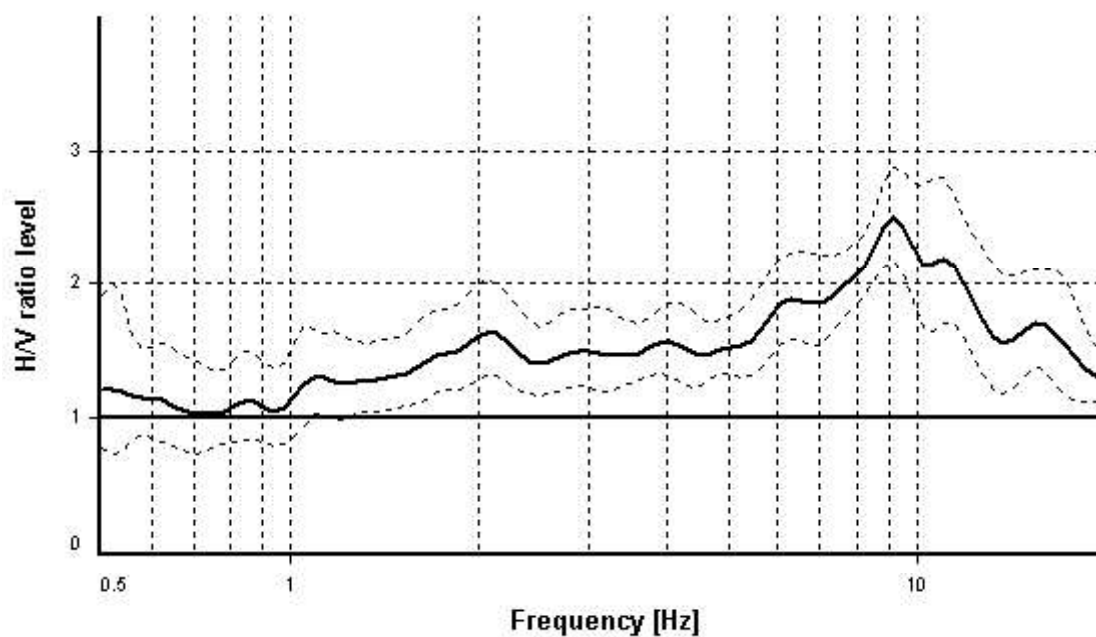
HVSR ANALYSIS

Tapering: Disabled

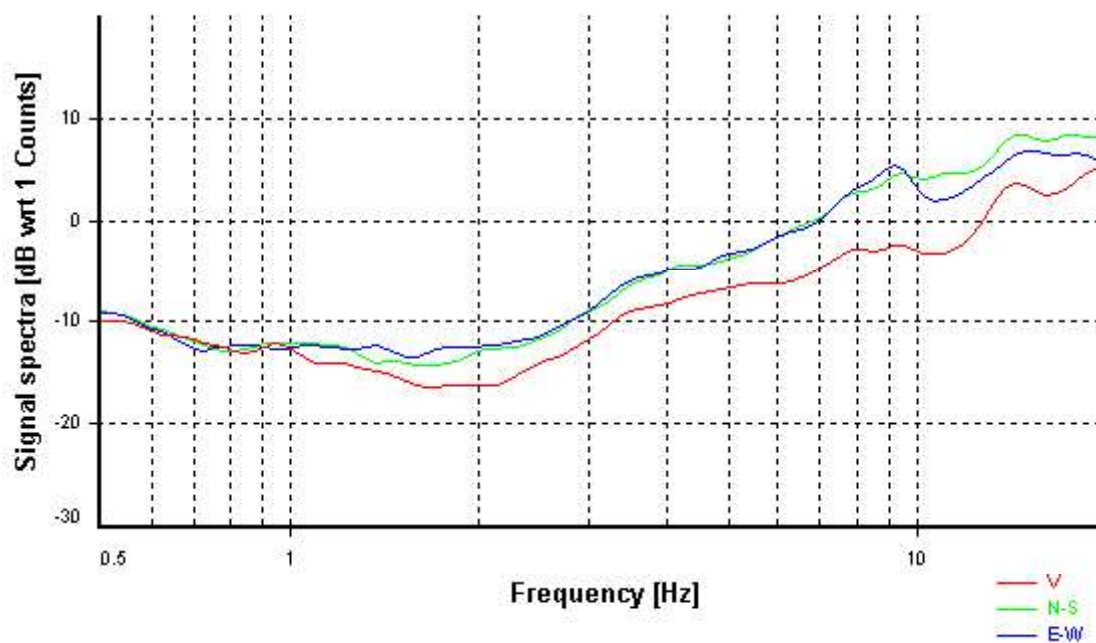
Smoothing: Konno-Ohmachi (Bandwidth coefficient = 40)

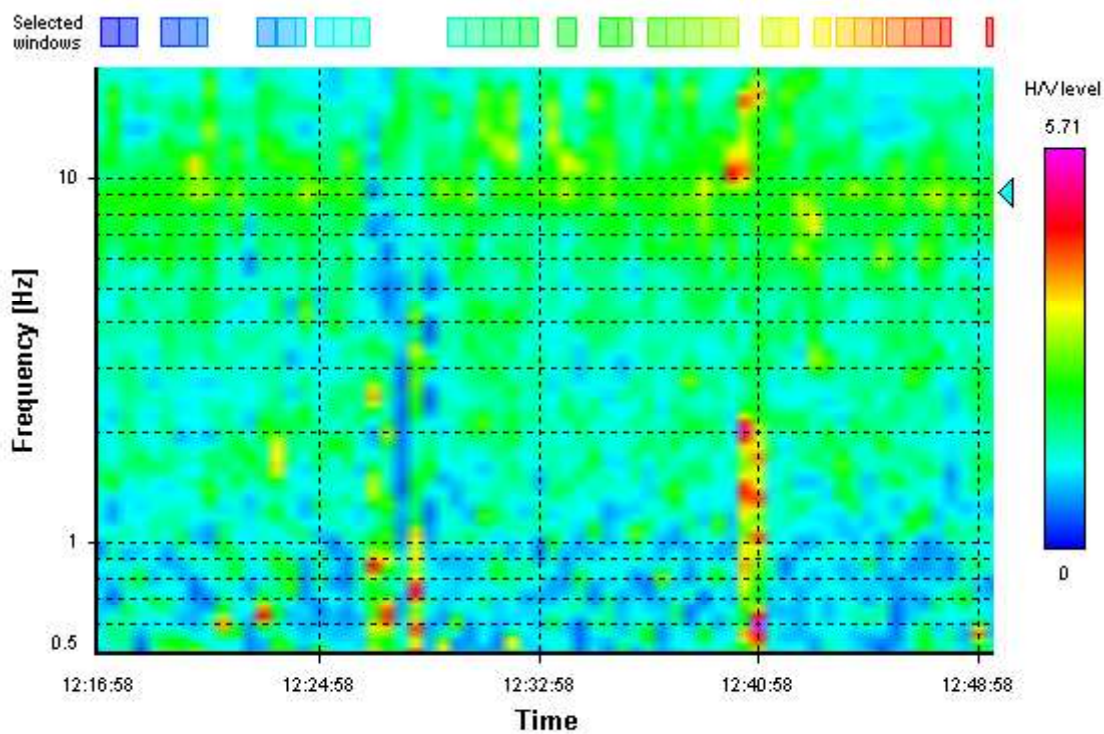
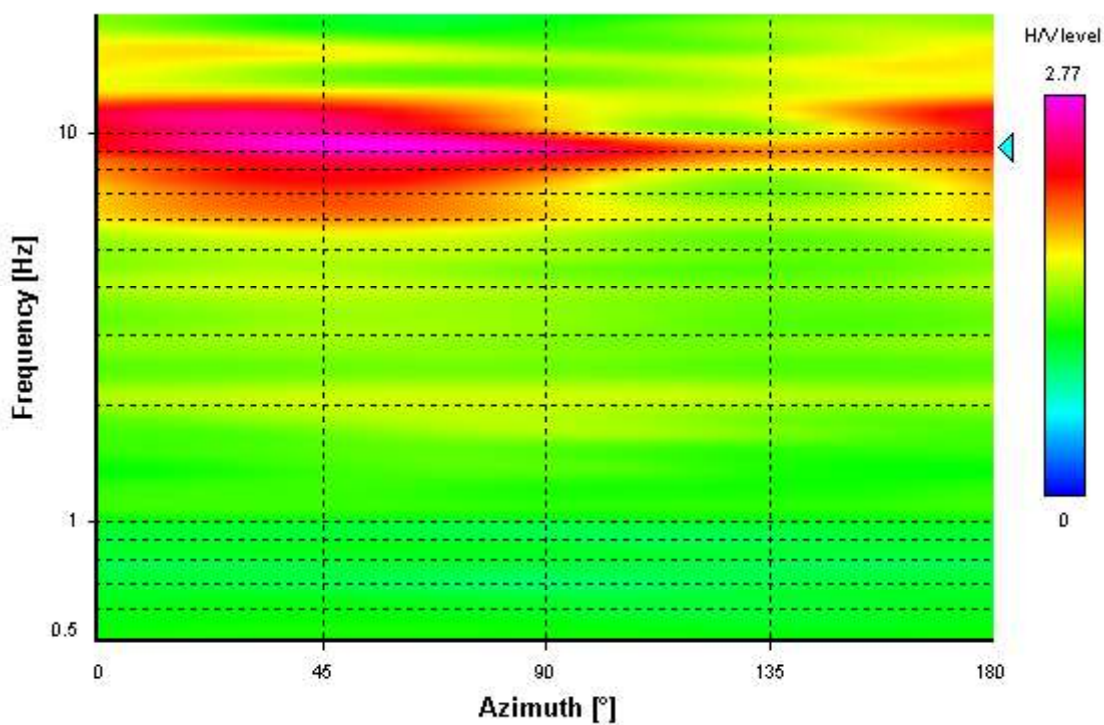
Instrumental correction: Disabled

HVSR average



Signal spectra average



HVSR time-frequency analysis (30 seconds windows)**HVSR directional analysis**

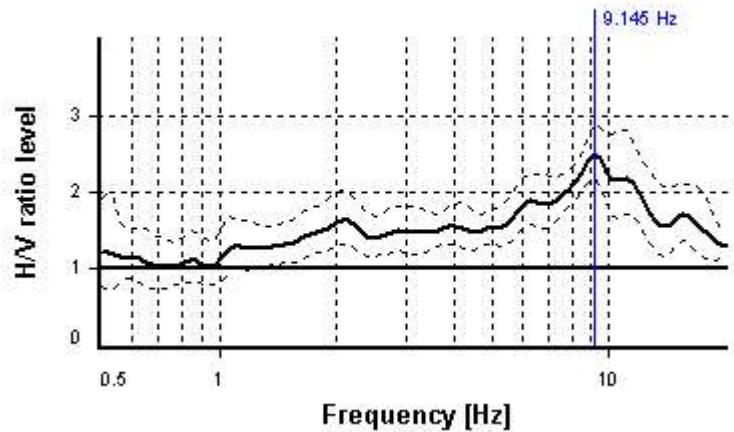
SESAME CRITERIA

Selected f_0 frequency

9.145 Hz

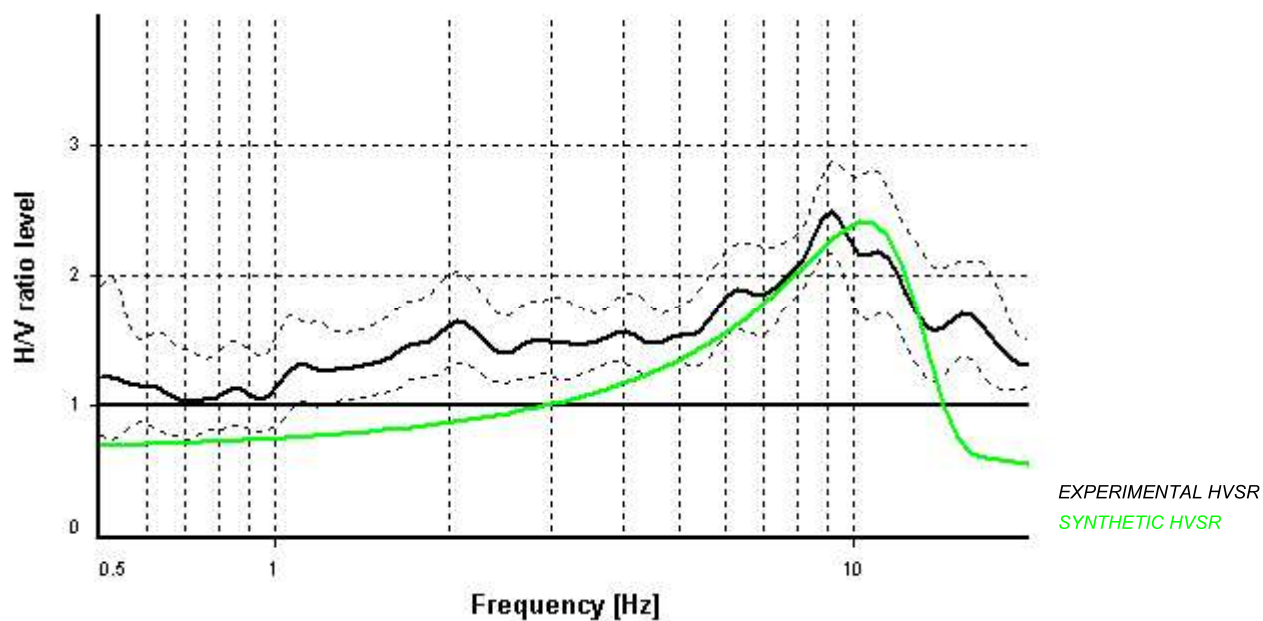
A_0 amplitude = 2.498

Average $f_0 = 9.607 \pm 1.310$

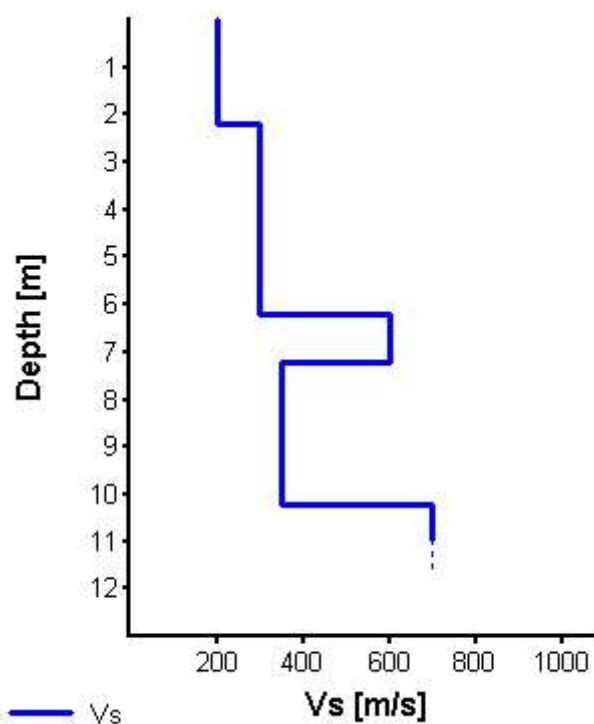


HVSR curve reliability criteria		
$f_0 > 10 / L_w$	35 valid windows (length > 1.09 s) out of 35	OK
$n_c(f_0) > 200$	11986.55 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 37	OK
HVSR peak clarity criteria		
$\exists f \text{ in } [f_0/4, f_0] \mid A_{H/V}(f) < A_0/2$	0 Hz	NO
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	0 Hz	NO
$A_0 > 2$	2.5 > 2	OK
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	0% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	1.31011 >= 0.45727	NO
$\sigma_A(f_0) < \theta(f_0)$	1.15054 < 1.58	OK
Overall criteria fulfillment		NO

Synthetic HVSR modelling



H [m]	D [m]	Vp [m/s]	Vs [m/s]	ρ [kg/m ³]
2.2	2.2	800	200	1600
4	6.2	800	300	1800
1	7.2	1000	600	2000
3	10.2	800	350	1800
-	> 10.2	1400	700	1990



Vs 30 = 477 m/s (Offset = 0 m)