

SURVEY INFORMATION

Date: 2023/12/30

Client: Comune di Monteverdi Marittimo

PLACE INFORMATION

Place ID: Canneto

Address: Dietro Campo da Tennis lato collina/sulla collina

Latitude: 43.201561

Longitude: 10.783270

Coordinate system: WGS84

Elevation: 281 m

Weather: nuvoloso

Notes: -

STATION INFORMATION

Station code: 1

Model: SARA GEOBOX

Sensor: SARA SS45 (external 4.5 Hz sensors)

Notes: -

PHOTOGRAPHIC REFERENCES



SIGNAL AND WINDOWING

Sampling frequency: 200 Hz

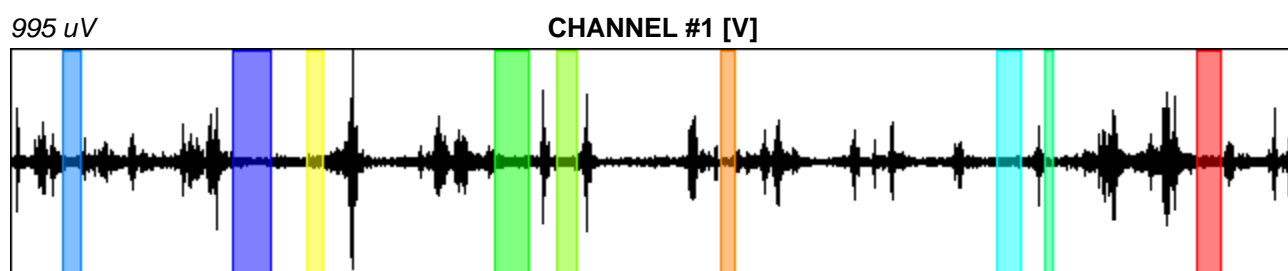
Recording start time: 2023/12/28 13:39:55

Recording length: 40 min

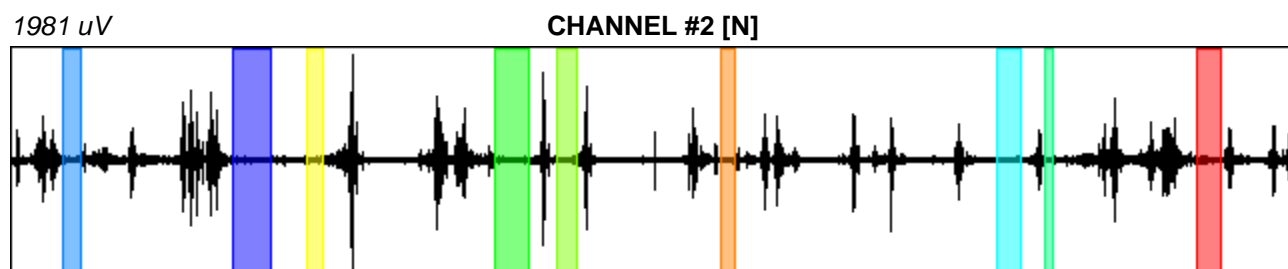
Windows count: 9

Average windows length: 35.49

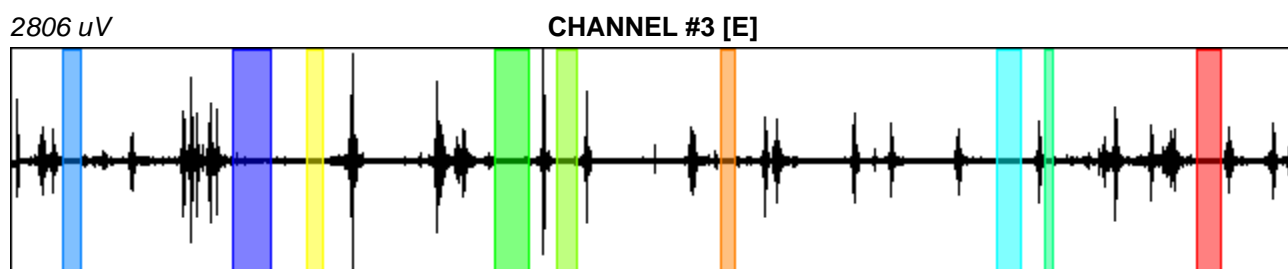
Signal coverage: 15.21%



-962 μV



-2088 μV



-2830 μV

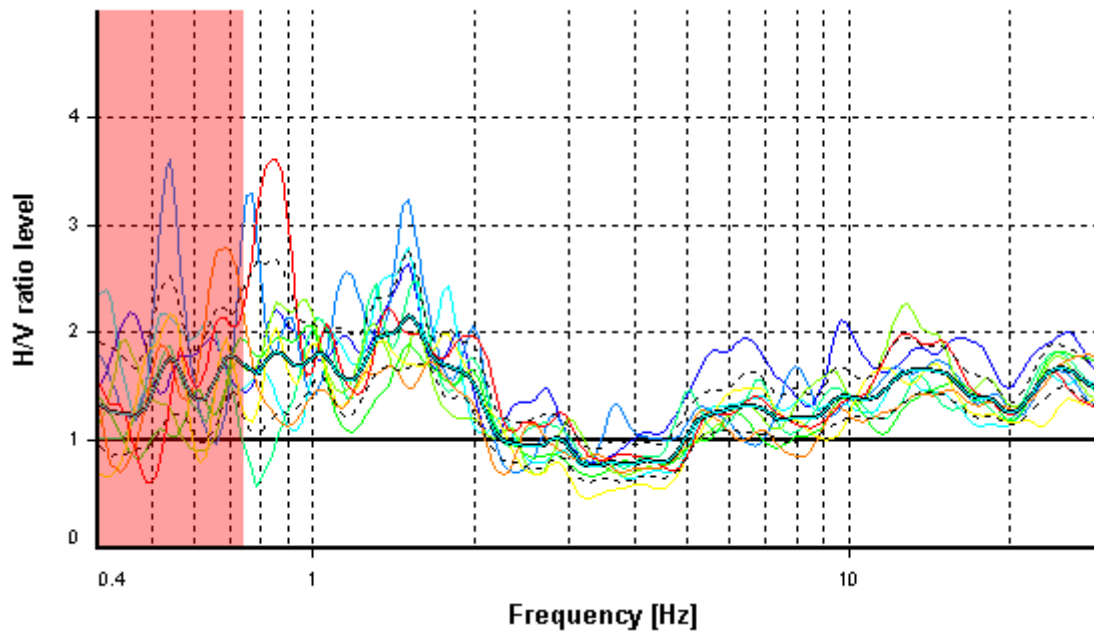
HVSR ANALYSIS

Tapering: Enabled (Bandwidth = 5%)

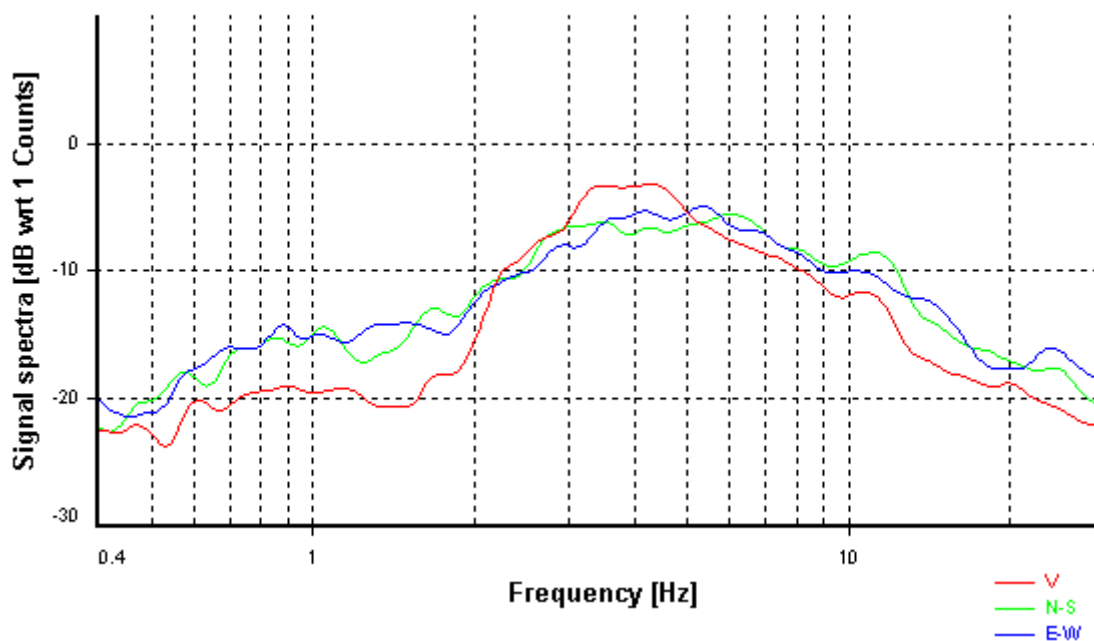
Smoothing: Konno-Ohmachi (Bandwidth coefficient = 40)

Instrumental correction: Disabled

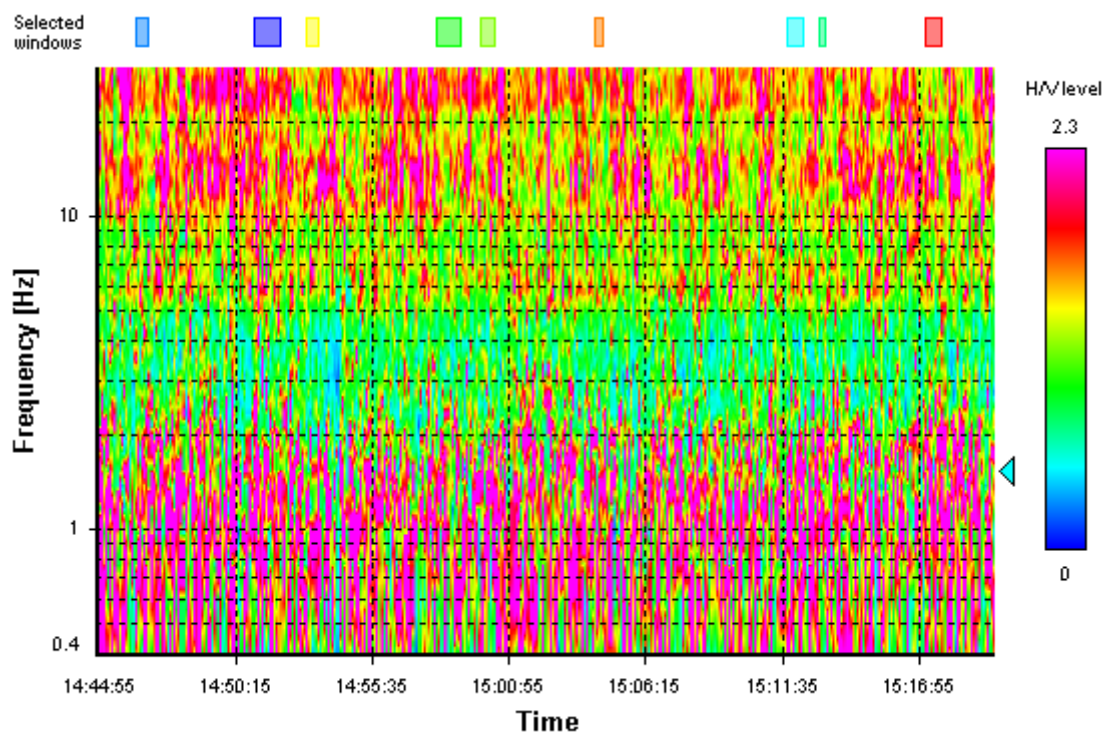
HVSR average



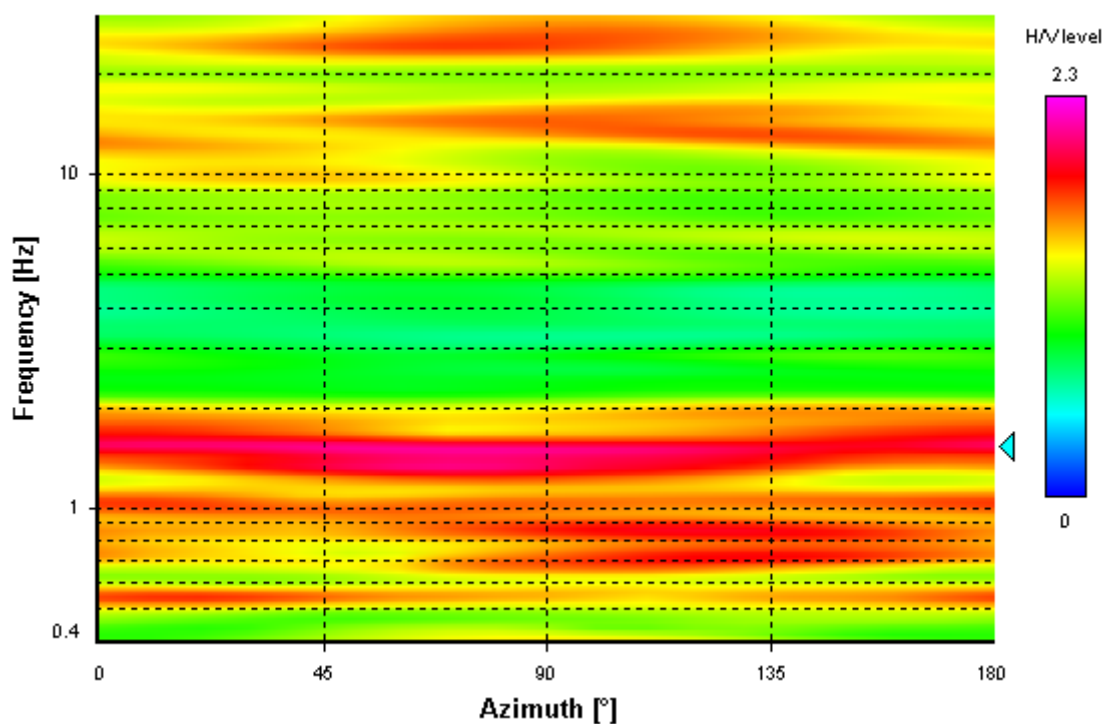
Signal spectra average



HVSR time-frequency analysis (5 seconds windows)



HVSR directional analysis



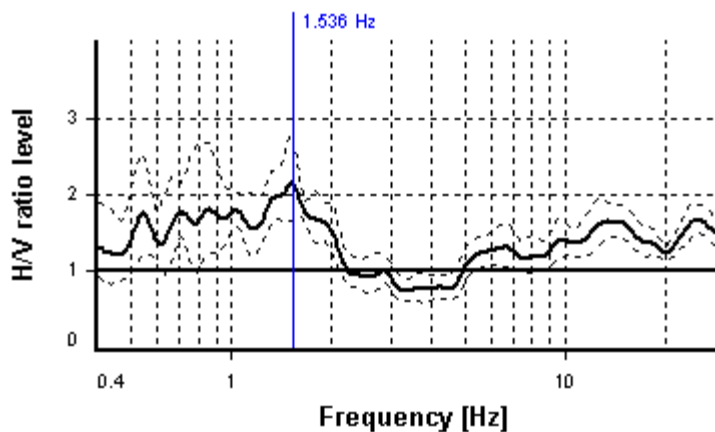
SESAME CRITERIA

Selected f_0 frequency

1.536 Hz

A_0 amplitude = 2.138

Average $f_0 = 1.520 \pm 0.146$



HVSR curve reliability criteria		
$f_0 > 10 / L_w$	9 valid windows (length > 6.51 s) out of 9	OK
$n_c(f_0) > 200$	490.41 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 63	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
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	2.2204 Hz	OK
$A_0 > 2$	2.14 > 2	OK
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	2.19% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	0.14562 < 0.15355	OK
$\sigma_A(f_0) < \theta(f_0)$	1.26505 < 1.78	OK
Overall criteria fulfillment		OK

SESAME CRITERIA

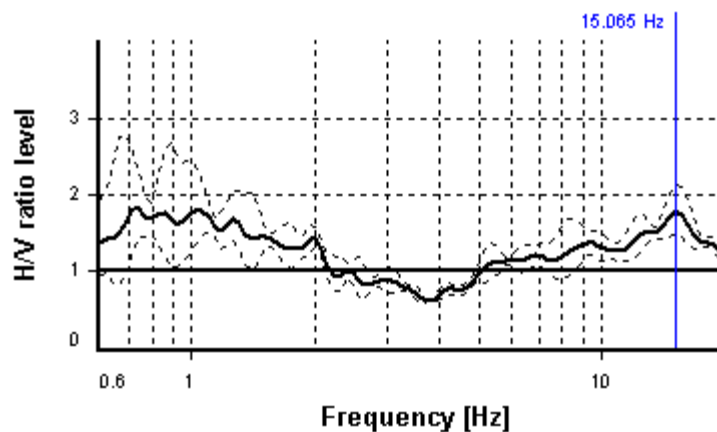
f0 primo contatto con Bedrock

Selected f_0 frequency

15.065 Hz

A_0 amplitude = 1.787

Average f_0 = 15.252 ± 0.616



HVSR curve reliability criteria		
$f_0 > 10 / L_w$	3 valid windows (length > 0.66 s) out of 3	OK
$n_c(f_0) > 200$	1408.58 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 28	OK
HVSR peak clarity criteria		
$\exists f \text{ in } [f_0/4, f_0] \mid A_{H/V}(f) < A_0/2$	4.84982 Hz	OK
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	0 Hz	NO
$A_0 > 2$	1.79 <= 2	NO
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	0% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	0.61628 < 0.75325	OK
$\sigma_A(f_0) < \theta(f_0)$	1.19399 < 1.58	OK
Overall criteria fulfillment		NO