

SURVEY INFORMATION

Date: 2024/01/29

Client: Comune di Monteverdi Marittimo

PLACE INFORMATION

Place ID: Monteverdi H11

Address: Le querciolaie

Latitude: 43°,177598

Longitude: 10°,716030

Coordinate system: WGS84

Elevation: 356 m

Weather: nuvoloso

Notes: -

STATION INFORMATION

Station code: 11

Model: SARA GEOBOX

Sensor: SARA SS45 (external 4.5 Hz sensors)

Notes: -

PHOTOGRAPHIC REFERENCES



SIGNAL AND WINDOWING

Sampling frequency: 300 Hz

Recording start time: 2024/03/01 11:33:13

Recording length: 33.33 min

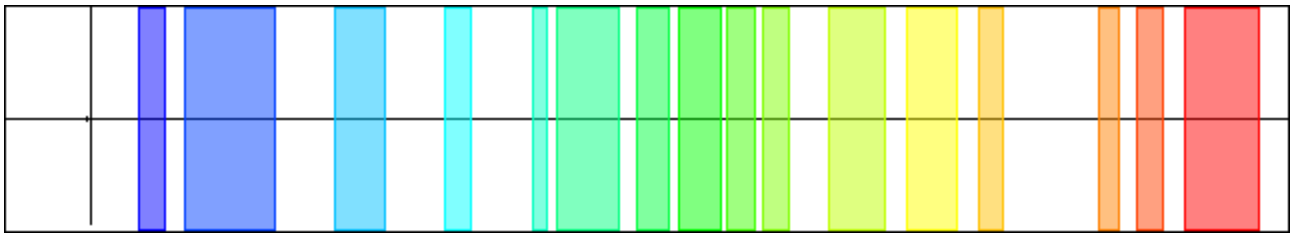
Windows count: 16

Average windows length: 62.67

Signal coverage: 50.14%

568045 Counts

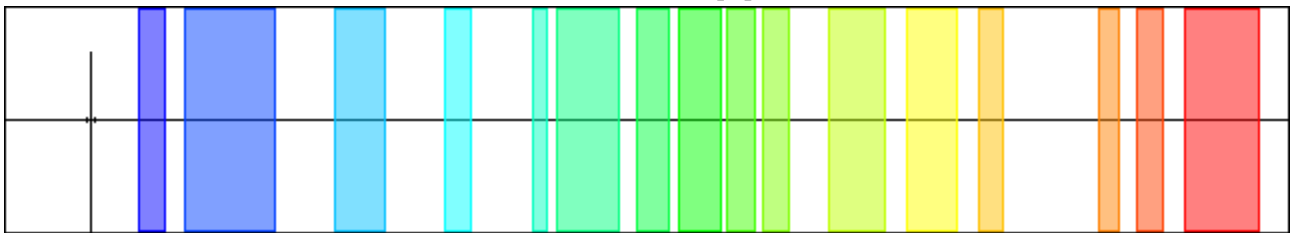
CHANNEL #1 [V]



-538660 Counts

376309 Counts

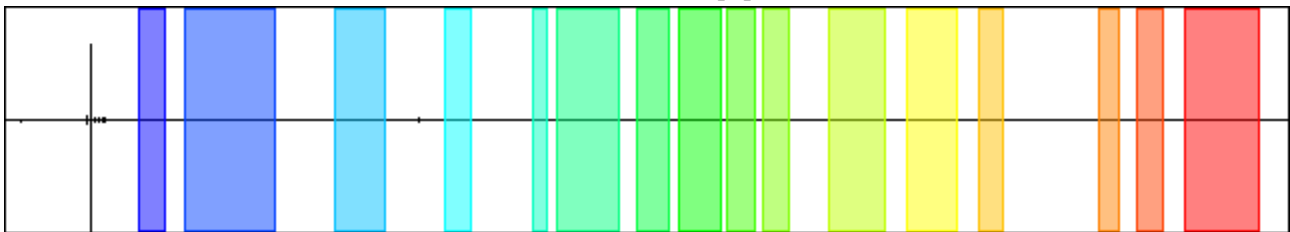
CHANNEL #2 [N]



-628966 Counts

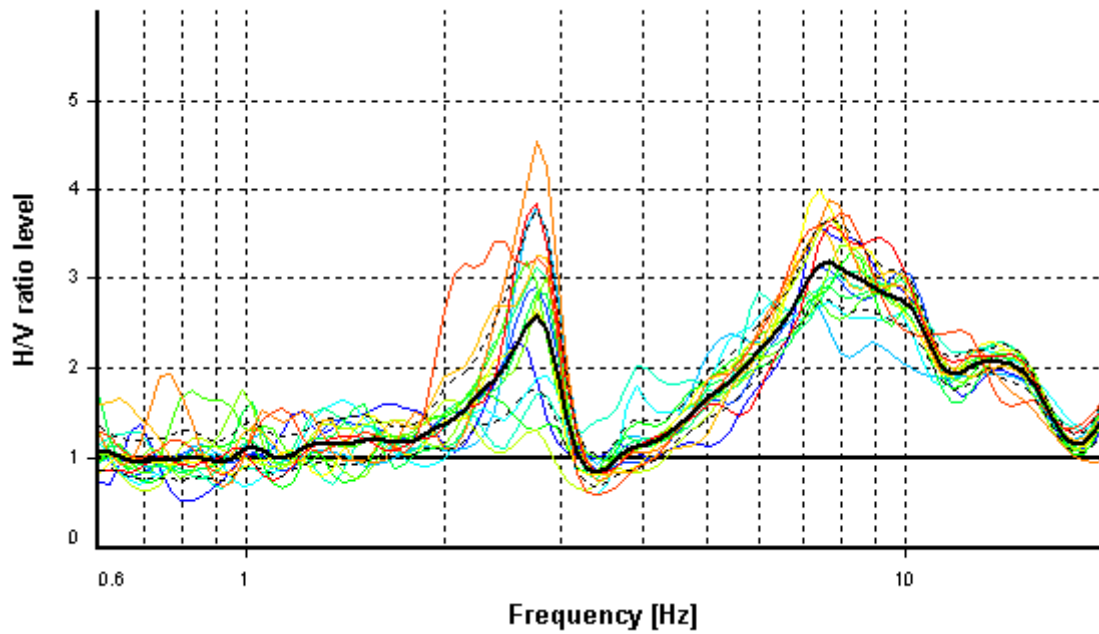
305704 Counts

CHANNEL #3 [E]

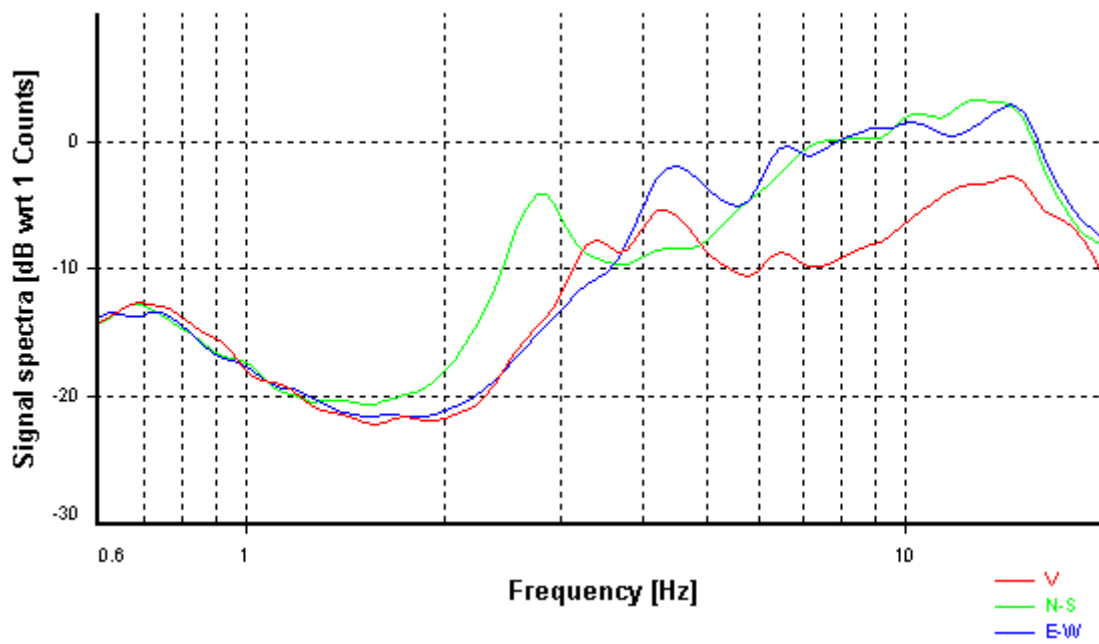


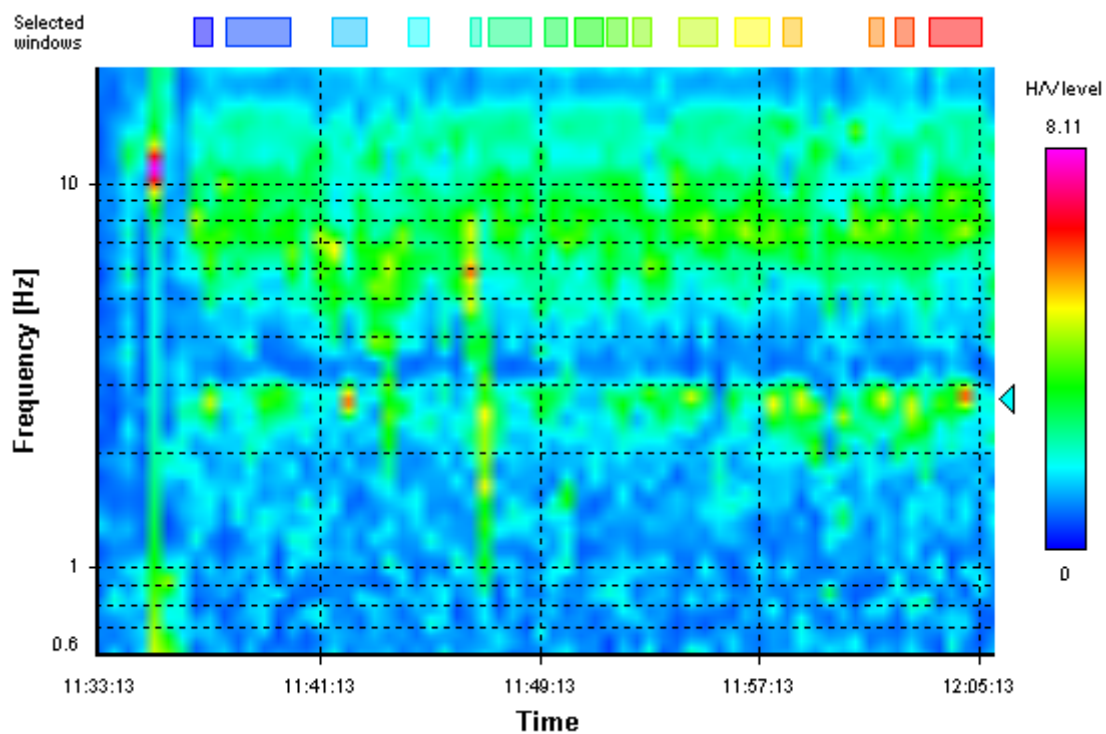
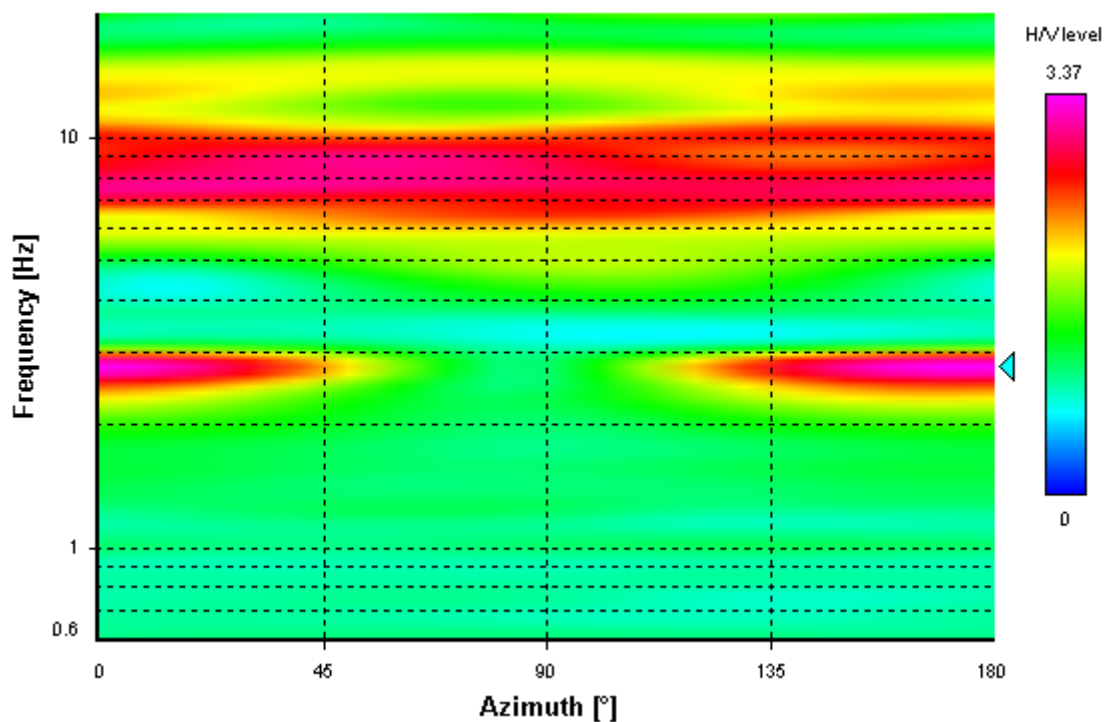
-451794 Counts

HVSR average



Signal spectra average



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

SESAME CRITERIA

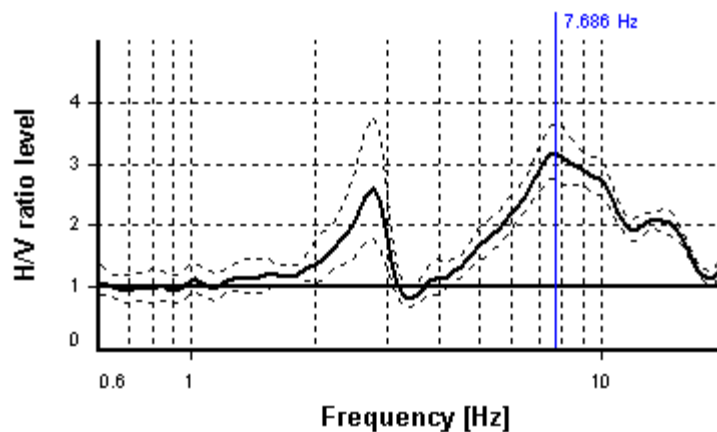
f0 primo contatto con bedrock

Selected f_0 frequency

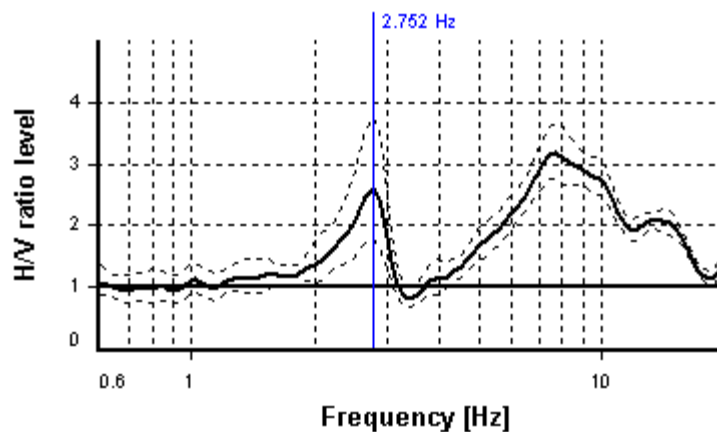
7.686 Hz

A_0 amplitude = 3.181

Average f_0 = 7.784 ± 0.719



HVSR curve reliability criteria		
$f_0 > 10 / L_w$	16 valid windows (length > 1.3 s) out of 16	OK
$n_c(f_0) > 200$	7706.81 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 39	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
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	16.75394 Hz	OK
$A_0 > 2$	3.18 > 2	OK
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	0% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	0.71884 >= 0.3843	NO
$\sigma_A(f_0) < \theta(f_0)$	1.15404 < 1.58	OK
Overall criteria fulfillment		OK



HVSR curve reliability criteria		
$f_0 > 10 / L_w$	16 valid windows (length > 3.63 s) out of 16	OK
$n_c(f_0) > 200$	2759.17 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 39	OK
HVSR peak clarity criteria		
$\exists f \text{ in } [f_0/4, f_0] \mid A_{H/V}(f) < A_0/2$	1.86378 Hz	OK
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	3.17055 Hz	OK
$A_0 > 2$	2.59 > 2	OK
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	0% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	0.39888 >= 0.13759	NO
$\sigma_A(f_0) < \theta(f_0)$	1.45961 < 1.58	OK
Overall criteria fulfillment		OK