



Appendice 1: report registrazioni HVSR

(Horizontal to Vertical Spectral Ratio)

P405



STATION INFORMATION

Station code: Postazione_1

Model: SARA GEOBOX

Sensor: SARA SS45PACK (integrated 4.5 Hz sensors)

Notes: -

PLACE INFORMATION

Place ID: Pomarance

Address: -

Latitude: 43.297844

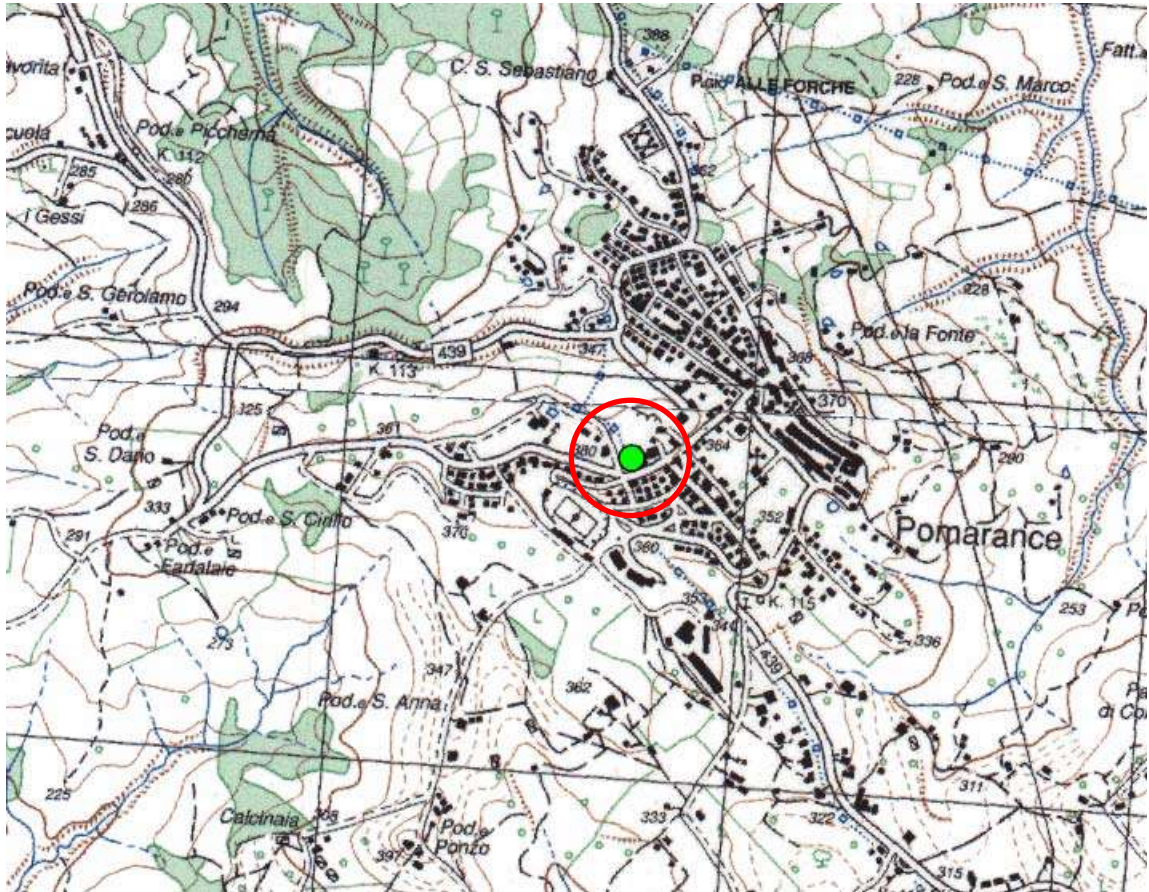
Longitude: 10.869334

Coordinate system: WGS84

Elevation: 577 m s.l.m.

Weather: Sunny

Notes: -



Misura 1 – HVSR - Riferimento cartografico ISPRA - IGM scala 1:25.000





PHOTOGRAPHIC REFERENCES HVSR1





SIGNAL AND WINDOWING

Sampling frequency: 200 Hz

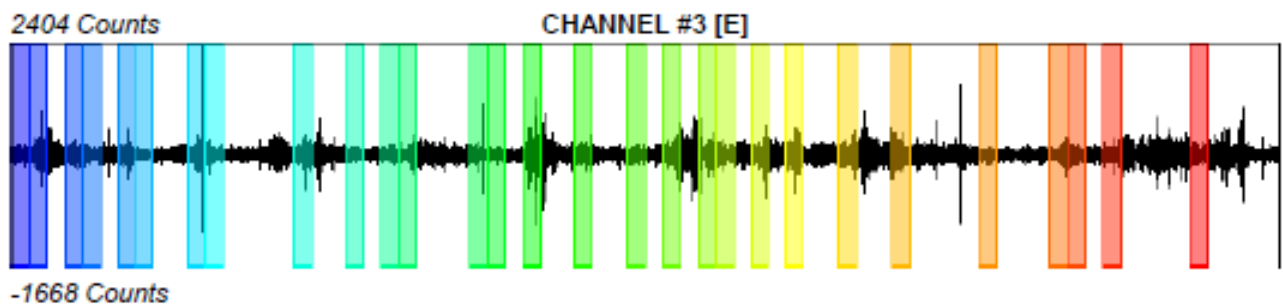
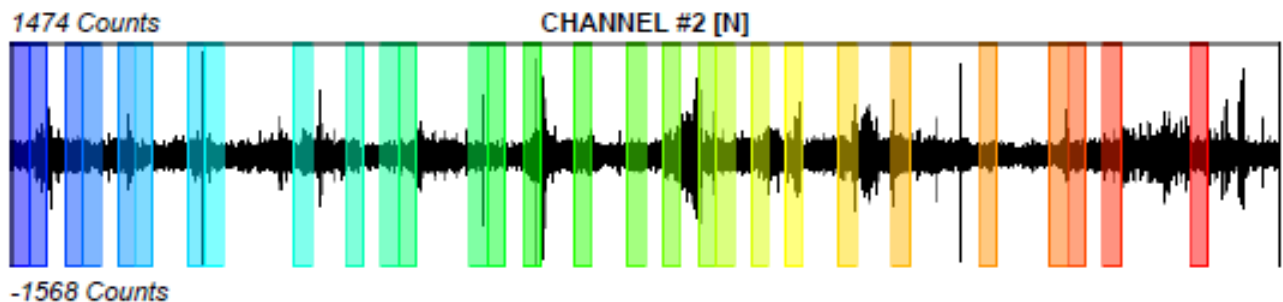
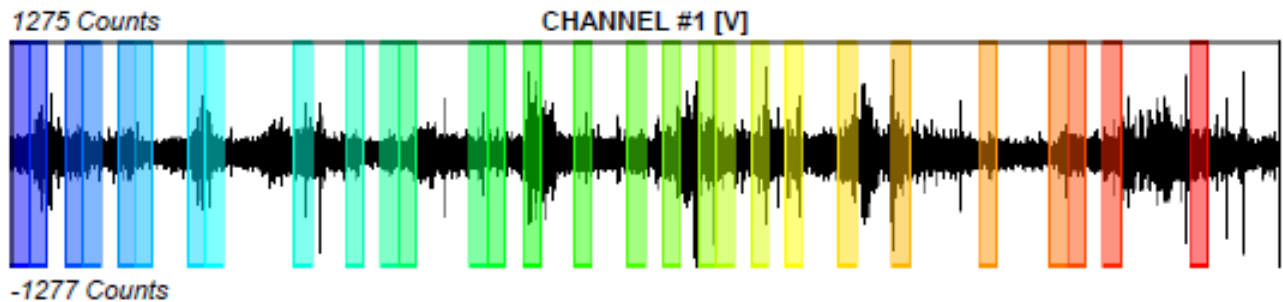
Recording start time: 2019/10/14 09:21:26

Recording length: 30 min

Windows count: 29

Average windows length: 25

Signal coverage: 40.28%





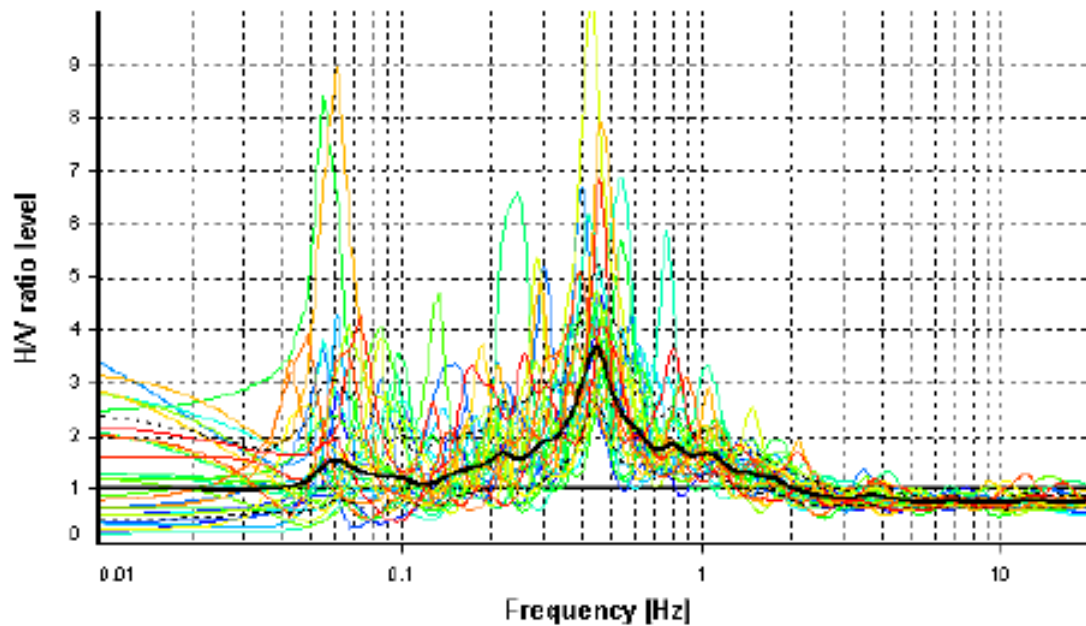
HVSR ANALYSIS

Tapering: Enabled (Bandwidth = 5%)

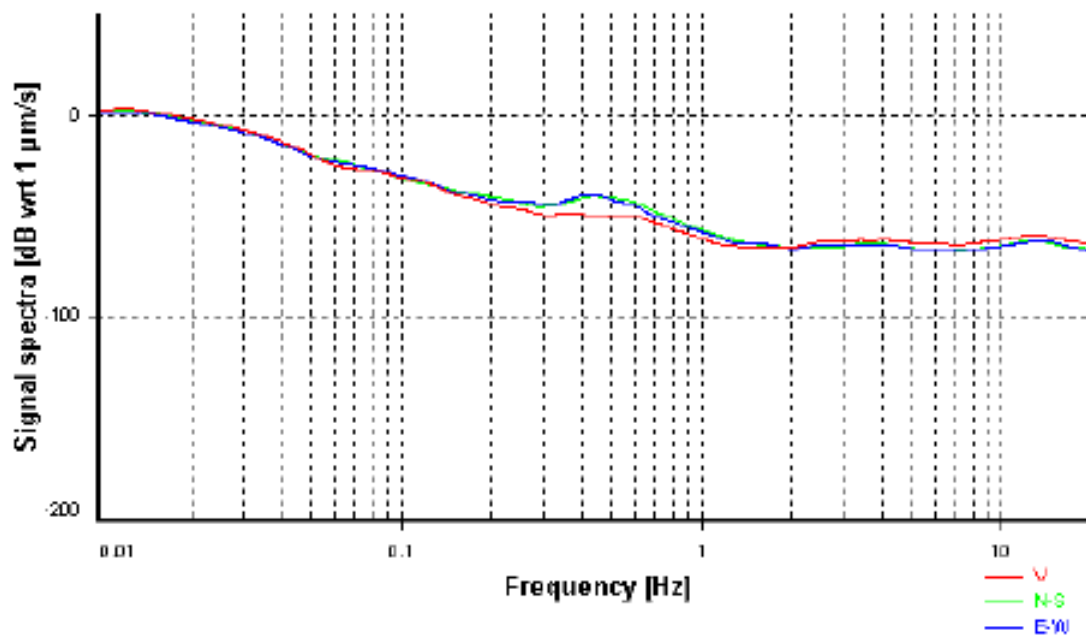
Smoothing: Konno-Ohmachi (Bandwidth coefficient = 30)

Instrumental correction: Enabled (Water level = 0.01 Hz)

HVSR average

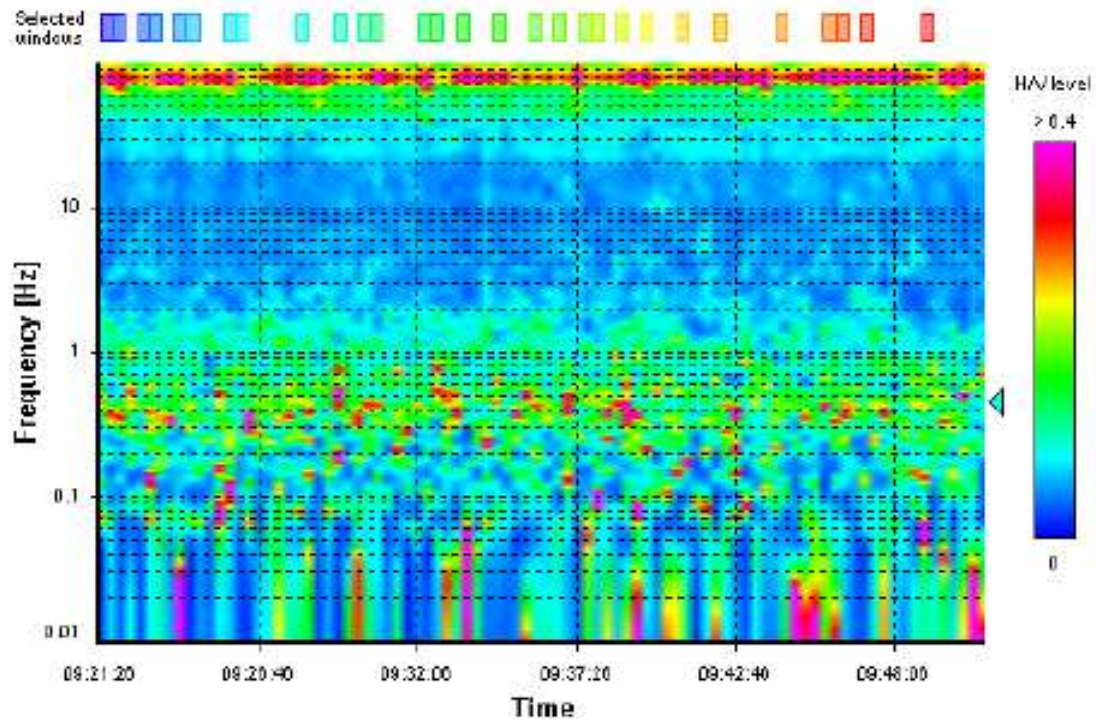


Signal spectra average

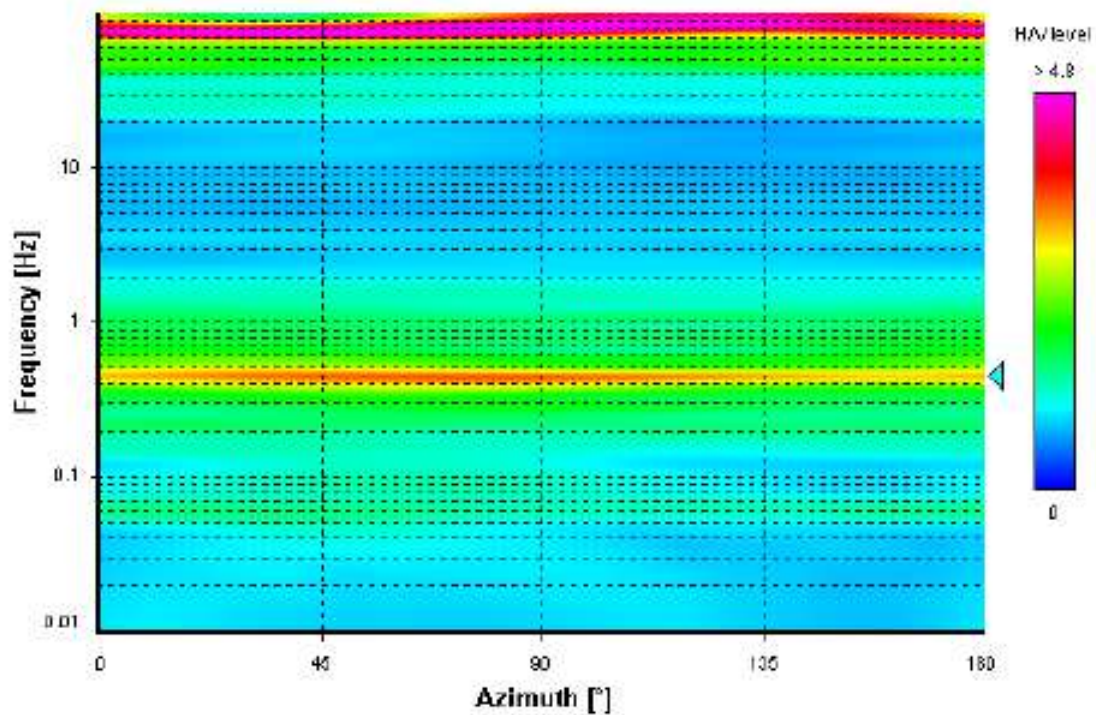




HVSR time-frequency analysis (20 seconds windows)



HVSR directional analysis





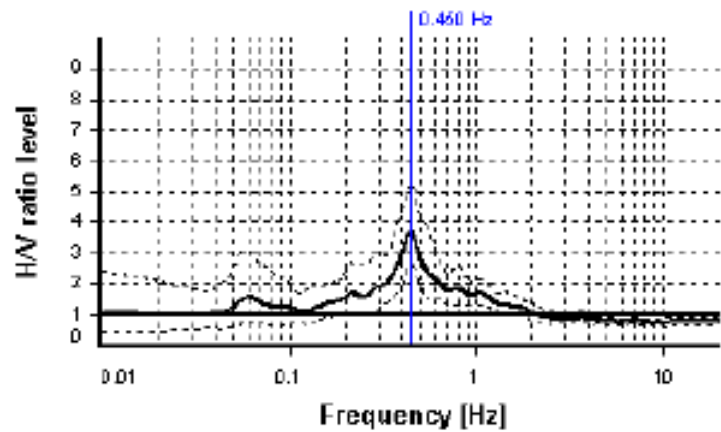
SESAME CRITERIA

Selected f_0 frequency

0.450 Hz

A_0 amplitude = 3.695

Average $f_0 = 0.445 \pm 0.062$



HVSr curve reliability criteria		
$f_0 > 10 / L_w$	29 valid windows (length > 22.2 s) out of 29	OK
$n_c(f_0) > 200$	326.58 > 200	OK
$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 151	OK
HVSr peak clarity criteria		
$\exists f \text{ in } [f_0/4, f_0] \mid A_{H/V}(f) < A_0/2$	0.28672 Hz	OK
$\exists f^* \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^*) < A_0/2$	0.67582 Hz	OK
$A_0 > 2$	3.69 > 2	OK
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	0.93% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	0.06155 < 0.09009	OK
$\sigma_A(f_0) < \theta(f_0)$	1.41629 < 2.5	OK
Overall criteria fulfillment		OK