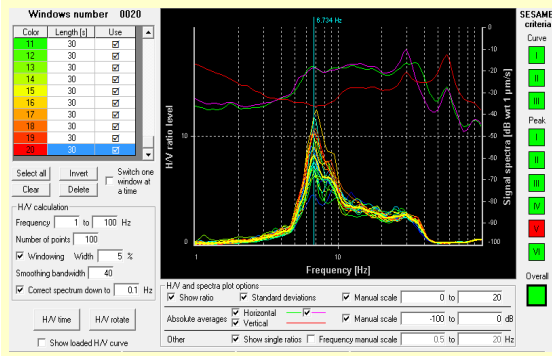


GeoExplorer HVSR is one of the most powerful tools on the market for H/V interpretation.

Designed with a special selection of calculation algorithms and highly structured programming GeoExplorer HVSR can perform signal analysis with an incredible efficiency!



Ease of use

With GeoExplorer HVSR you can generate a validated report in the range of 30-60 seconds of work!
As soon a signal window is selected the H/V curve appears on the result window, including absolute spectrums for quality data check.
A moving cursor allows to scan all frequencies and pinpoint the one(s) that satisfies the SESAME criteria.

Available functions

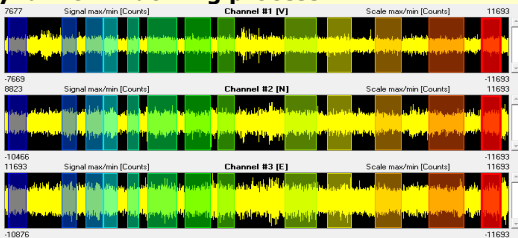
- H/V curves generated in real time
- Signal homogeneity on the horizontal plane
- Signal and H/V ratio stability in time
- H/V and absolute spectrum overlap for fastest data quality check
- Windows selection switchable ON/OFF for better H/V curve restitution
- SESAME criteria for curve and peaks checked at all frequencies
- Programmable windowing algorithm
- Programmable smoothing
- Window selection with possible repositioning down to sample-by-sample
- AUDIO signal analysis
- Stratigraphic modelling
- Vp/Vs calculation for given stratigraphic model
- If needed the instrumental correction is possible using a respfile
- Geopsy[#] H/V format file compatibility
- Synthetic / Experimental curve comparison for VsXX (Vs30) calculation using (Geopsy[#] gpell)
- Automatic report generation in PDF format

THE FIRST HVSR SOFTWARE WITH EMBEDDED SEISMIC SIGNAL AUDIFICATION!!!
Using the audification process it is possible to detect artificially generated noise (anthropic noise) which can potentially damage the quality of the survey.

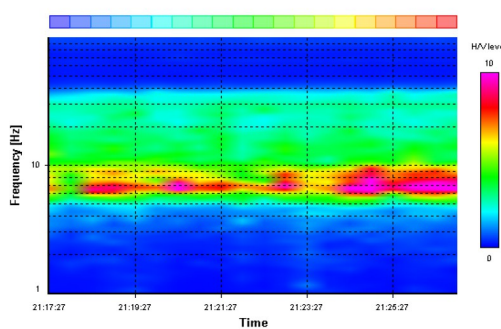
System requirements

GeoExplorer HVSR runs under Windows o.s. XP, Vista, 7 and 8. It is recommended the use of a 17" screen and an audio board.

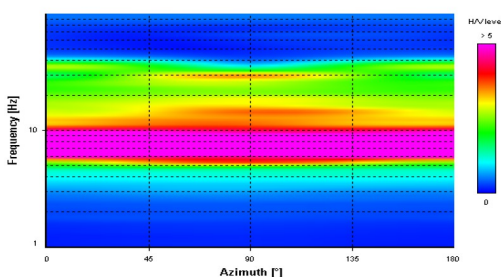
Dynamic windowing process



HVSR time-frequency analysis (30 seconds windows)

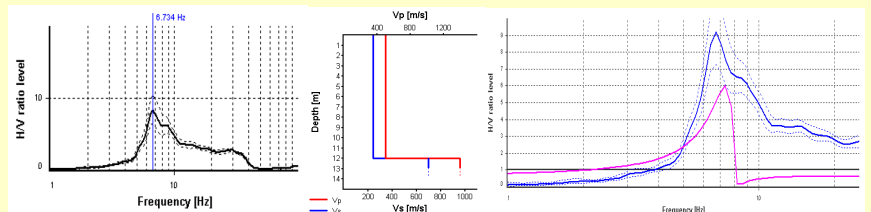


HVSR directional analysis



HVSR curve reliability criteria

| | | |
|---|--|----|
| $f_0 > 10 / L_w$ | 20 valid windows (length > 1.48 s) out of 20 | OK |
| $n_s(f_0) > 200$ | 4040.49 > 200 | OK |
| $\sigma_w(f) < 2$ for $0.5f_0 < f < 2f_0$ | Exceeded 0 times in 20 | OK |
| HVSR peak clarity criteria | | |
| $\exists f \text{ in } [0.4, f_0] A_{HV}(f) < A_0$ | 5.59081 Hz | OK |
| $\exists f \text{ in } [f_0, 4f_0] A_{HV}(f) < A_0$ | 10.72267 Hz | OK |
| $A_0 > 2$ | 8.33 > 2 | OK |
| $f_{\text{val}}(A_{HV}(f) \pm \sigma_w(f)) = f_0 \pm 5\%$ | 0% \leq 5% | OK |
| $\sigma_1 < \sigma(f_0)$ | 0.59741 \geq 0.33671 | NO |
| $\sigma_w(f_0) < 9(f_0)$ | 1.26854 < 1.58 | OK |
| Overall criteria fulfillment | | OK |



[#]Geopsy is a powerful and open source software (GPL) available for download at www.geopsy.org.

Sara Electronic Instruments s.r.l. reserves the right to modify at any time features and changes (also price changes) without any prior notice.

SARA electronic instruments s.r.l. cap.soc. 100.000,00€ i.v.

06129 - Perugia - Via A.Mercuri, 4 - ITALY

Tel. +39 075 5051014 - Fax +39 075 5006315 - www.sara.pg.it - info@sara.pg.it

Reg. Trib. Perugia N-5718 - C.C.I.A.A. 109864 - C.F. e P.iva 00380320549 - N.Reg.RAEE: IT0802000001128