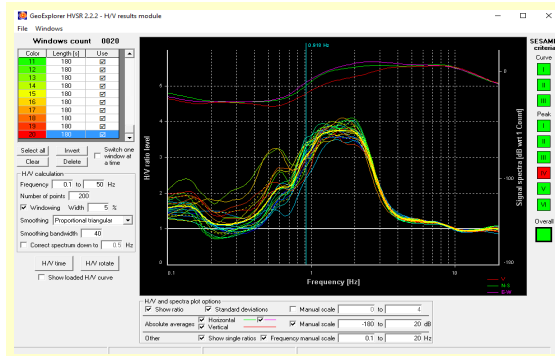
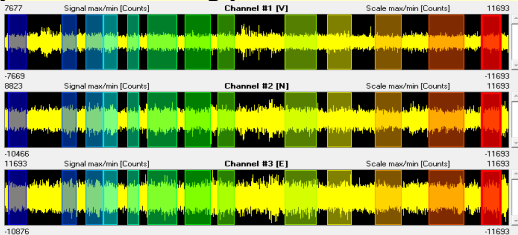


GeoExplorer HVSR is one of the most powerful tools on the market for H/V interpretation.

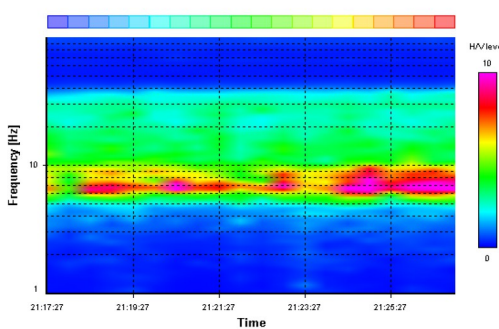
Designed with a series of selected calculation algorithms and with highly structured programming techniques GeoExplorer HVSR can perform signal analysis with an incredible efficiency!



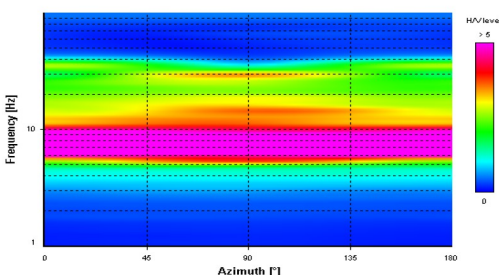
### Dynamic windowing process



HVSR time-frequency analysis (30 seconds windows)



HVSR directional analysis



### 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 that satisfies the SESAME criteria or the operator's criteria.

### Available functions

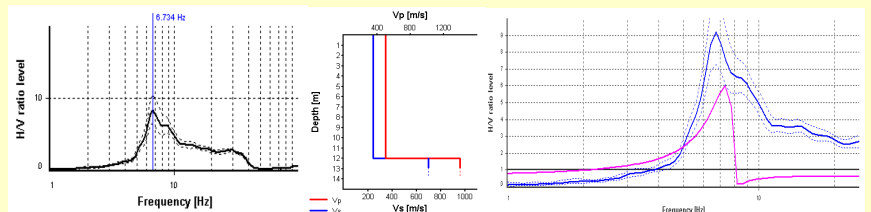
- H/V curves generated in real time
- Signal homogeneity on the horizontal plane
- Signal and H/V ratio stability in time
- H/V and absolute spectrum overlap for fastest data quality check
- Windows selection switchable ON/OFF for better H/V curve restitution
- SESAME criteria for curve and peaks checked 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<sup>#</sup> H/V format file compatibility
- Synthetic / Experimental curve comparison for VsXX (Vs30) calculation using (Geopsy<sup>#</sup> gpell)
- Automatic report generation in PDF format

**THE FIRST PUBLISHED 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.

HVSR curve reliability criteria		
$f_0 > 10 / L_w$	20 valid windows (length > 1.48 s) out of 20	OK
$n_b(f_0) > 200$	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		
$\exists f \text{ in } [0.4, f_0]   A_{wv}(f) < A_0$	5.59081 Hz	OK
$\exists f \text{ in } [f_0, 4f_0]   A_{wv}(f) < A_0$	10.72267 Hz	OK
$A_0 > 2$	8.33 > 2	OK
$f_{peak}(A_{wv}(f) \pm \sigma_w(f)) = f_0 \pm 5\%$	0% $\Leftrightarrow$ 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



<sup>#</sup>Geopsy is a powerful and open source software (GPL) available for download at [www.geopsy.org](http://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.