

Technologies for seismology, engineering and geophysics

The GeoExplorer suite includes various modules for recording and processing geophysical data.

Designed to be fully integrated with our tools, it provides high interoperability between the various modules for cross-checking of modeling and various tools for data quality control.

The GE MASW module, thanks to its complete synergy with GE DoReMi and the DoReMi[®] seismograph, allows complete control over the dataset to be processed, also generating various 1D models.

For more information: www.sara.pg.it or info@sara.pg.it

- By recording data with GE DoReMi, it is possible to open the entire dataset with one click within the MASW module, speeding up the processing process and minimizing the risk of errors in geometries.

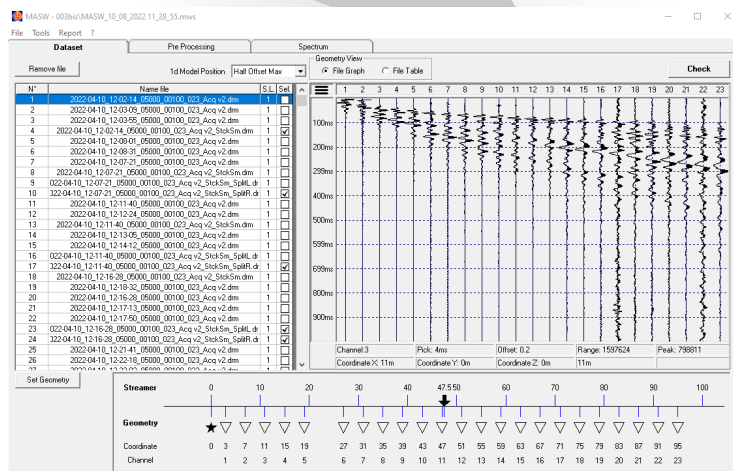
The layout follows a logic that helps the processing experience and guarantees complete control over the entire process and final results, always allowing the operator to evaluate and apply the best choices based on the analyzed geological context, making the module versatile and flexible.

The ability to analyze both the FV and FK spectrum, the ability to cross-check the refraction data by plotting the Vs values converted from refraction data on the spectrums, minimizes interpretative errors.

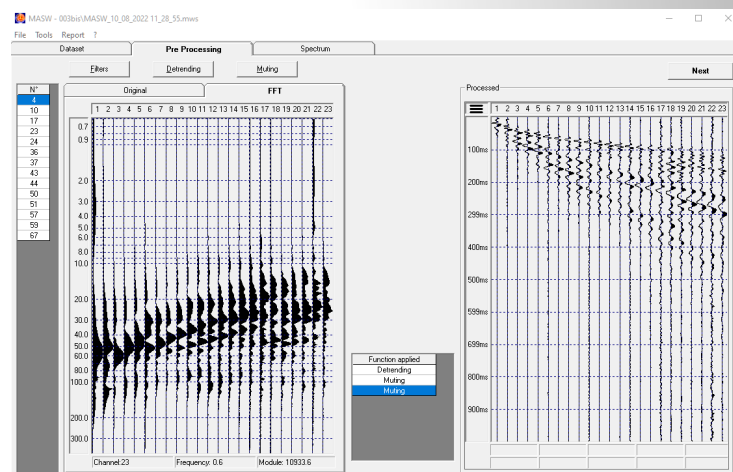
Saving the data set and work status allows for different processing and interpretation flows, allowing backups at various steps.

- The software allows the processing of Rayleigh and Love wave data, allowing comparison on multi-component and multishot datasets for a more robust modeling, with the possibility of importing 1D models from other GeoExplorer software.

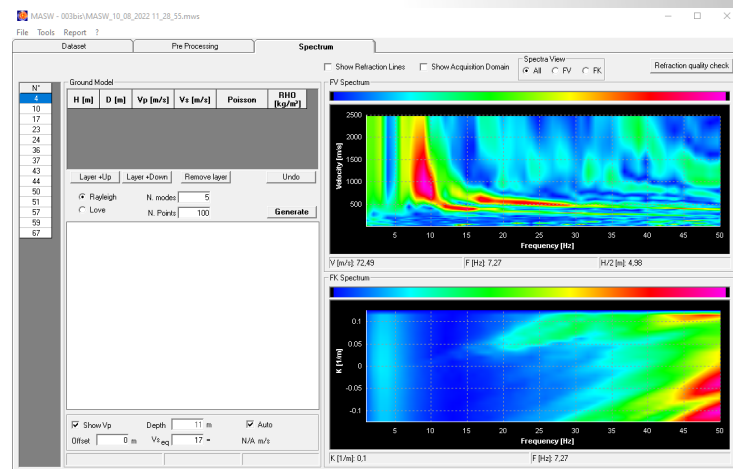
- The GeoExplorer suite requires a Windows PC.



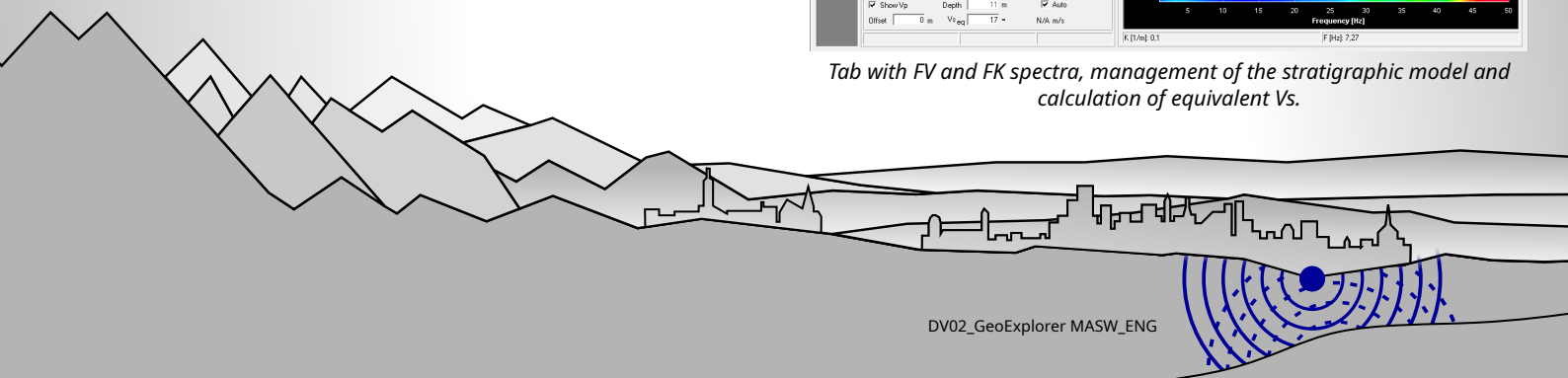
Dataset Tab, display of the seismogram and shot geometry with the user-selected theoretical position of the 1D model.



Pre Processing Tab, display of the FFT and processed seismogram.



Tab with FV and FK spectra, management of the stratigraphic model and calculation of equivalent Vs.



Seismogram management:

- Killing trace
- Deleting trace
- Mirror
- Custom time shift
- Move channel
- Auto offset
- Custom offset

Dataset management:

- Auto-staking seismograms
- Seismogram split
- Seismogram geometry

Pre-processing:

- FFT angle channel
- Filters (bandpass, highpass, lowpass)
- Muting
- Detrending

Elaboration method:

- Direct modelling of Rayleigh waves
- Direct modelling of Love waves

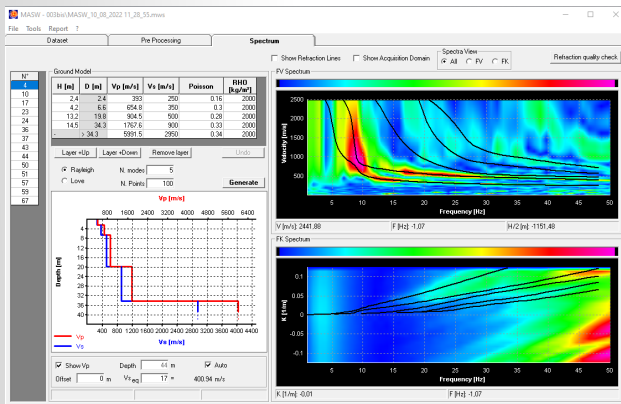
Additional tools and quality check:

- 1D intercept method
- Plotting refraction velocity data on spectrum
- Spectrum F-K e F-V
- Spatial alias limits and reliability range
- PDF report with notes and photos
- Work save and backup

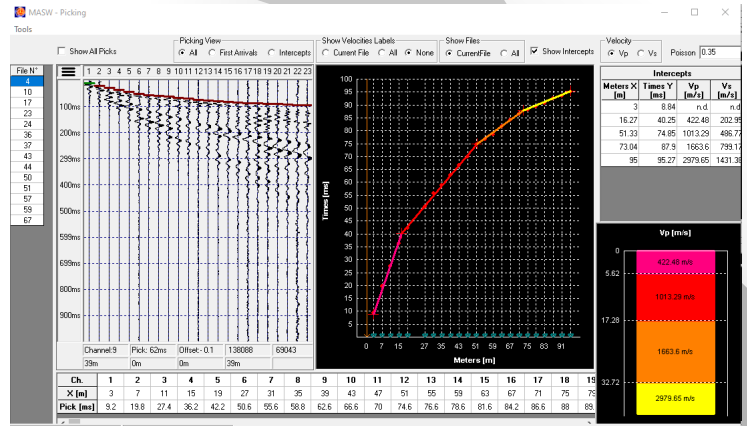
The module does not require third-party software for graphical representations and it is possible to export each single image and table displayed.

The supported formats are:

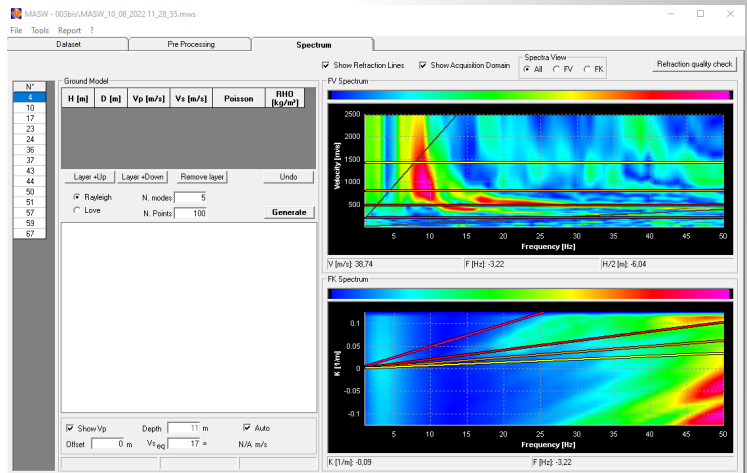
- .drm
- .seg1
- .seg2



Modeling and calculation of Vs30 or equivalent Vs.



Tab for picking the first arrivals, defining the speeds to be plotted on the spectrums and a 1D model representative of the refraction.



Representation of reliability domains and spatial alias and plotting of velocities from the refraction table.

SARA electronic instruments s.r.l. is constantly looking for new solutions, implementations and optimizations for the GeoExplorer Suite, providing a high level of customer support and gathering customer feedback for the Suite improvement.

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