Mineby Data

This data has been used by kind permission of:

Atomic Energy Canada Ltd

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Demo Features

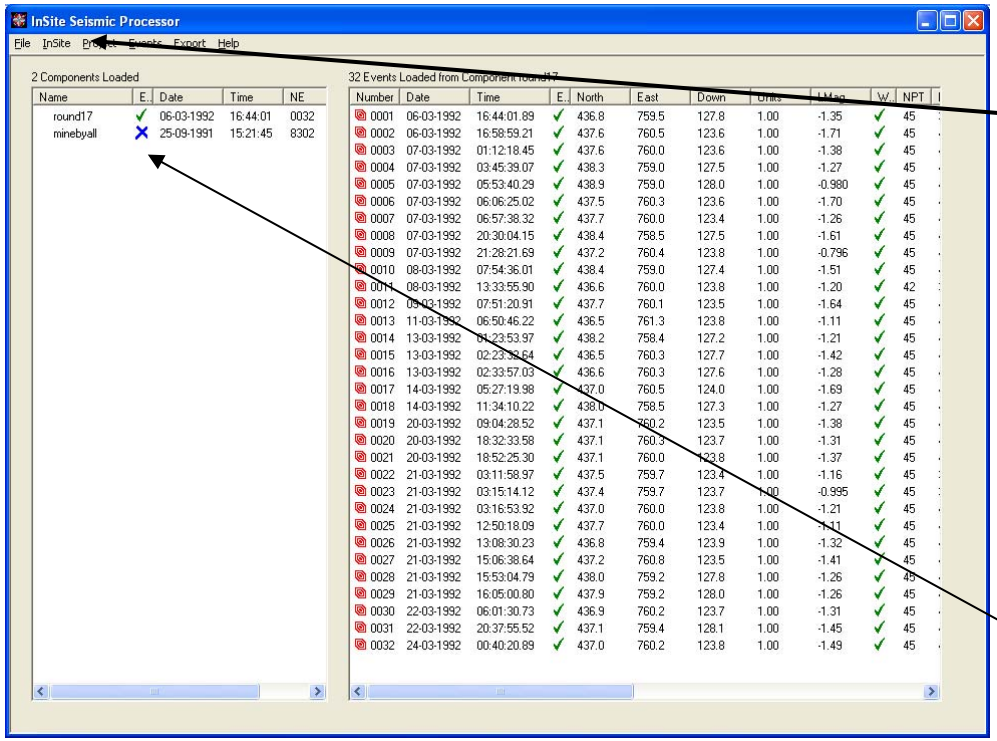
- This demo uses Microseismic data with waveforms. It is designed to give you an overview of the Waveform Visualiser using instrument views.
- The data is from AECL's Mineby Experiment.
- The following slides give you some options to try in the software.

It's a good idea to ...

... run through the "SKB Prototype" demo presentation first as this gives a more thorough overview of the Location Visualiser.

... run through the "TSX Cluster" demo presentation first as this gives a more thorough overview of the Waveform Visualiser.

Data Visualiser I

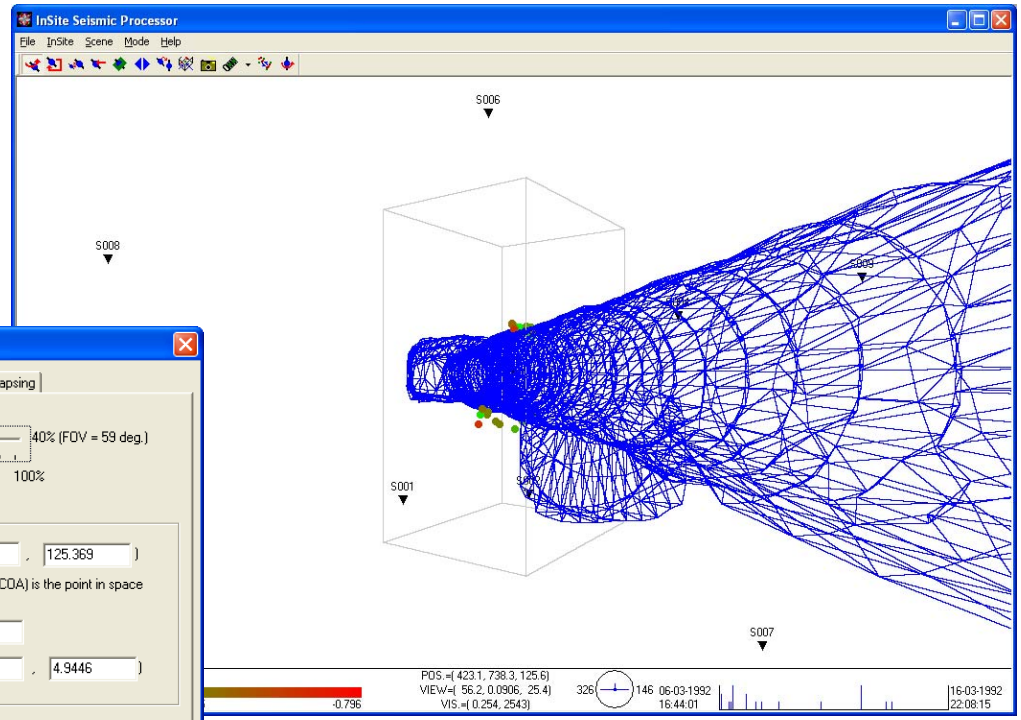


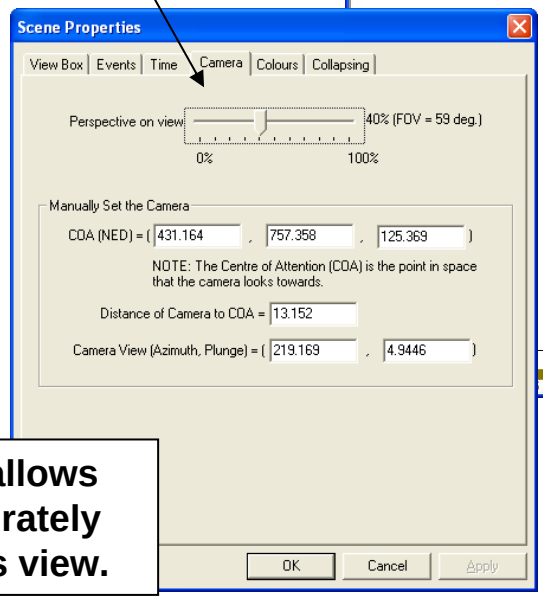
The InSite menu allows you to switch between the available visualisers.

In this example the Component “round17” contains waveforms for the events, but “minebyall” just contains processed locations.

Location Visualiser I

InSite allows the user to change the amount of perspective on the view.

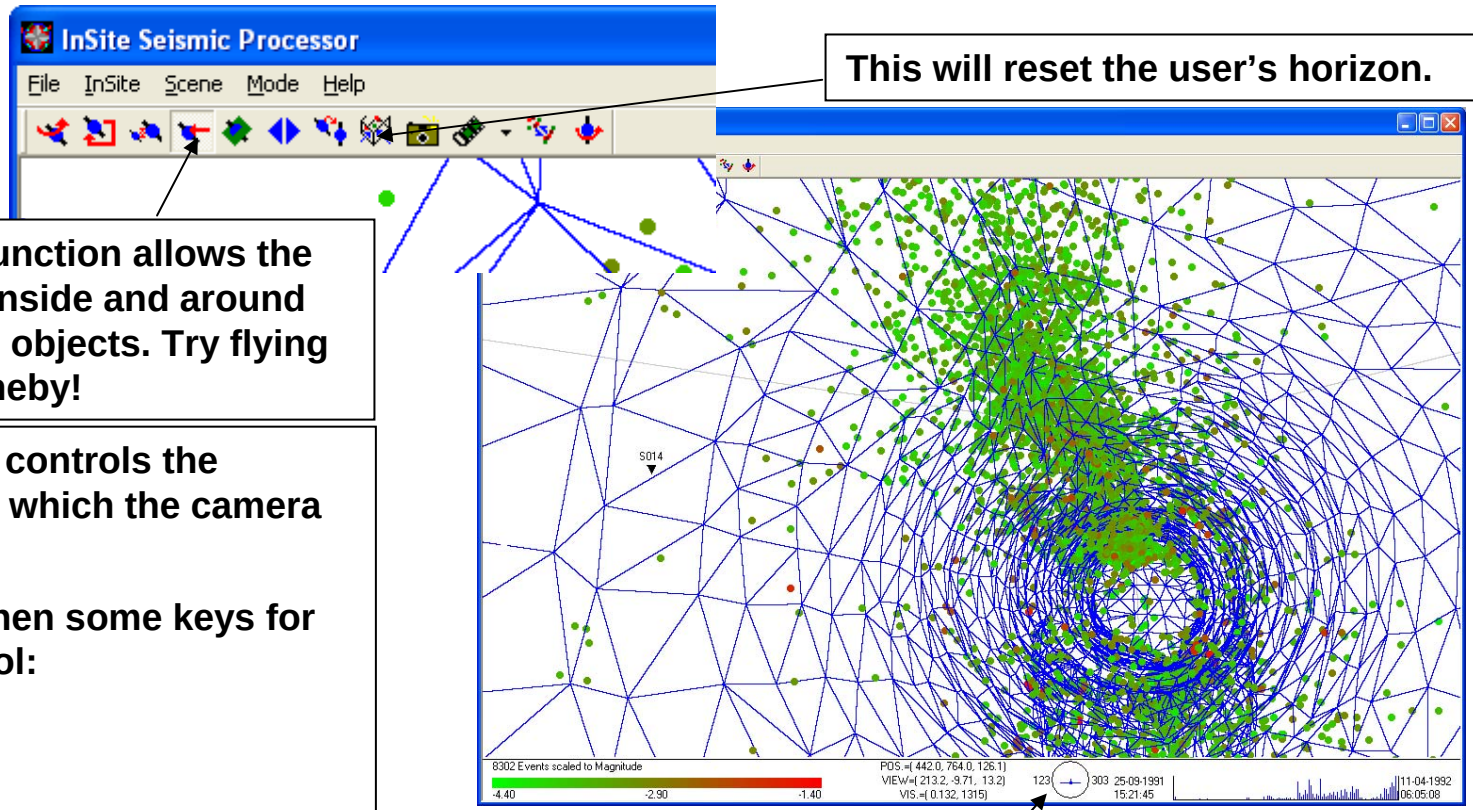




This page also allows the user to accurately set the camera's view.

More perspective gives the viewer greater feeling of depth AND allows the user to better use the "Fly" function.

Location Visualiser II



This will reset the user's horizon.

The "Fly" function allows the user to fly inside and around the scene's objects. Try flying into the Mineby!

The mouse controls the direction in which the camera is pointing.

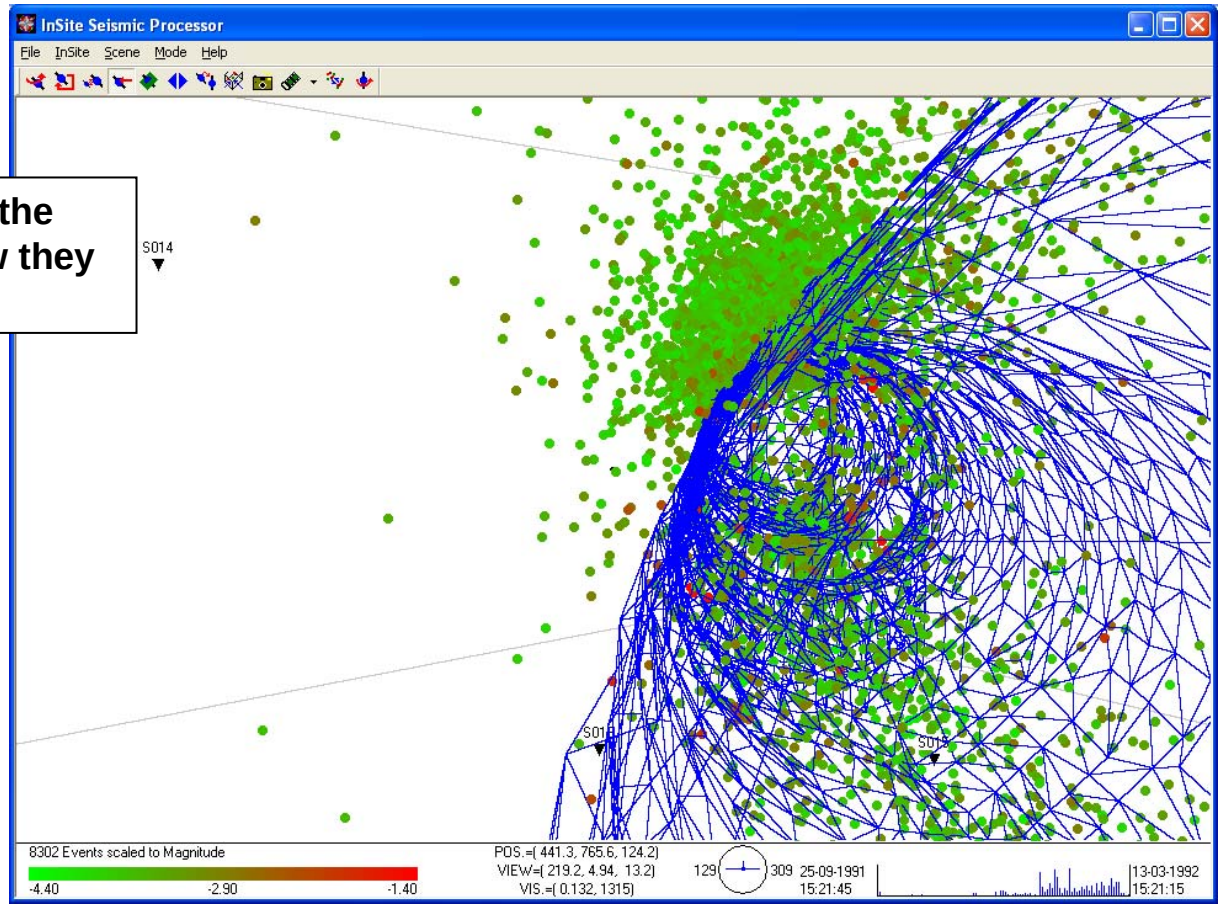
There are then some keys for flight control:

S - Forward
X - Backward
A - Slide left
D - Slide right
Q - Pitch anti-clockwise
W - Pitch clockwise
F - Slide up
V - Slide down

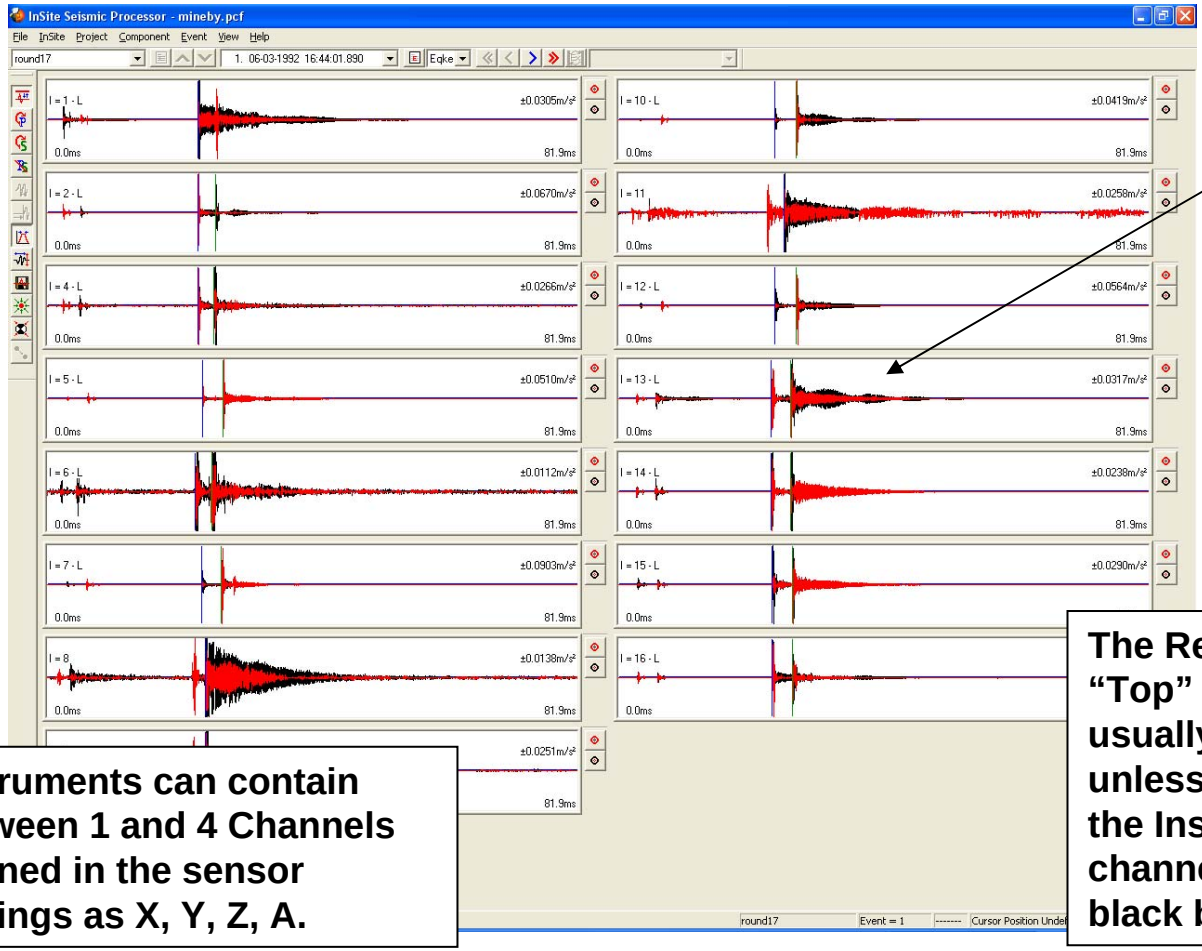
The orientation marker describes how the camera is orientated in space.

Location Visualiser III

By careful manipulation the user can get any 3D view they like in the Scene



Waveform Visualiser I

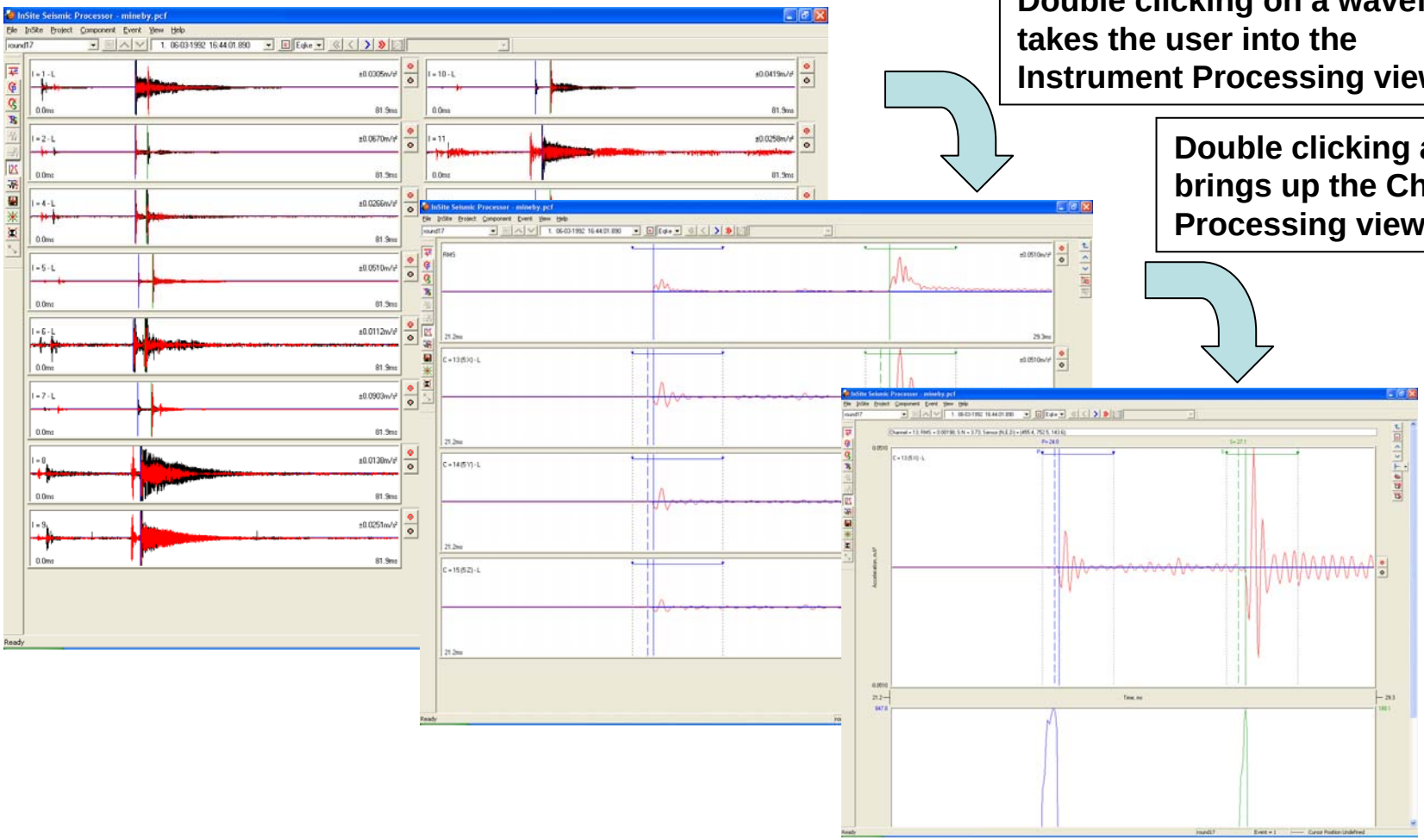


In this example, triaxial sensors have been used. The channels are plotted by their "Instruments" rather than as individual "Channels". This can be toggled on/off in the Project Properties.

Instruments can contain between 1 and 4 Channels defined in the sensor settings as X, Y, Z, A.

The Red waveform is the "Top" channel. This is usually the X channel unless it doesn't exist on the Instrument. The other channels are plotted in black behind this.

Waveform Visualiser II



Double clicking on a waveform takes the user into the Instrument Processing view.

Double clicking again brings up the Channel Processing view.

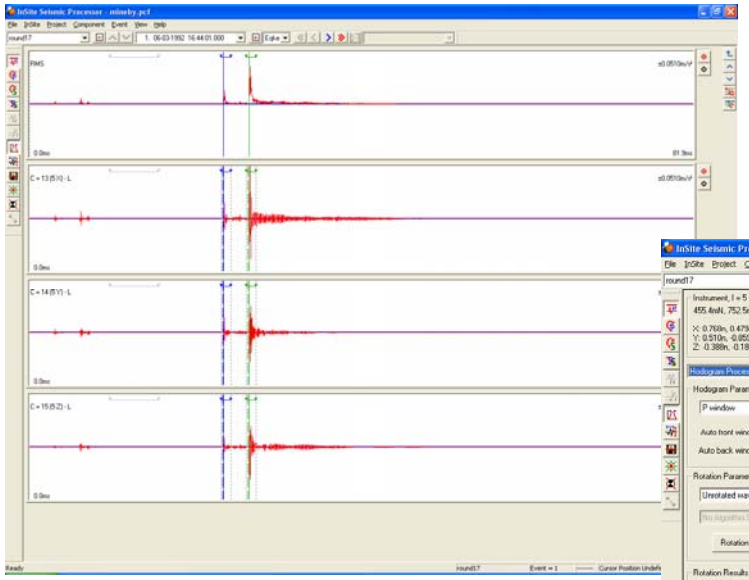
Waveform Visualiser III

The top view is the Root-Mean-Square (RMS) waveform for this instrument.

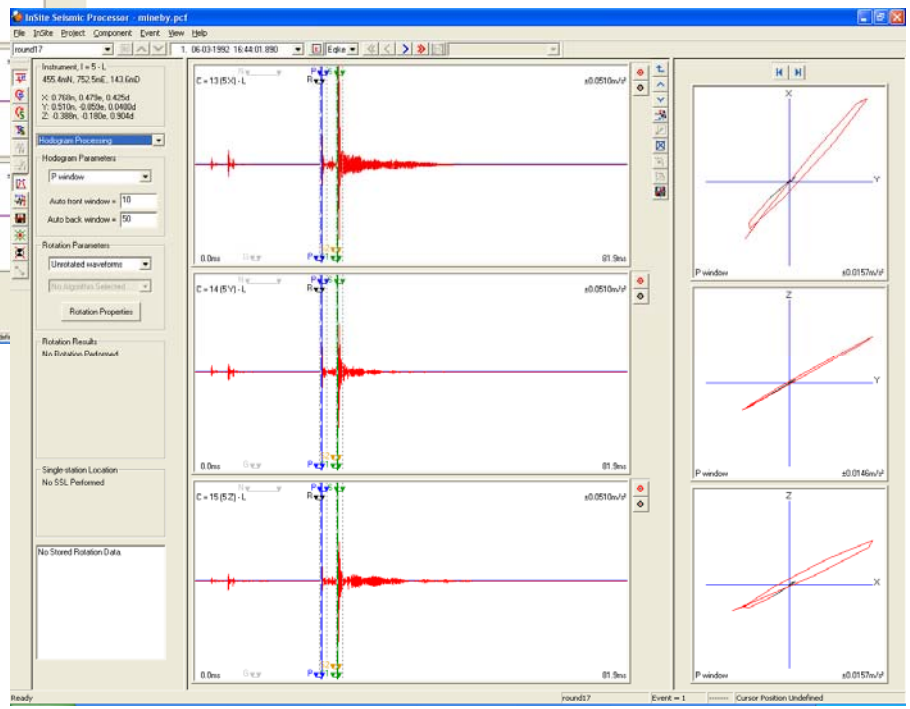
The waveform arrival picks and the scaling functions are linked together for the channels on the instrument.

Try re-picking and re-locating some of the Round 17 events….

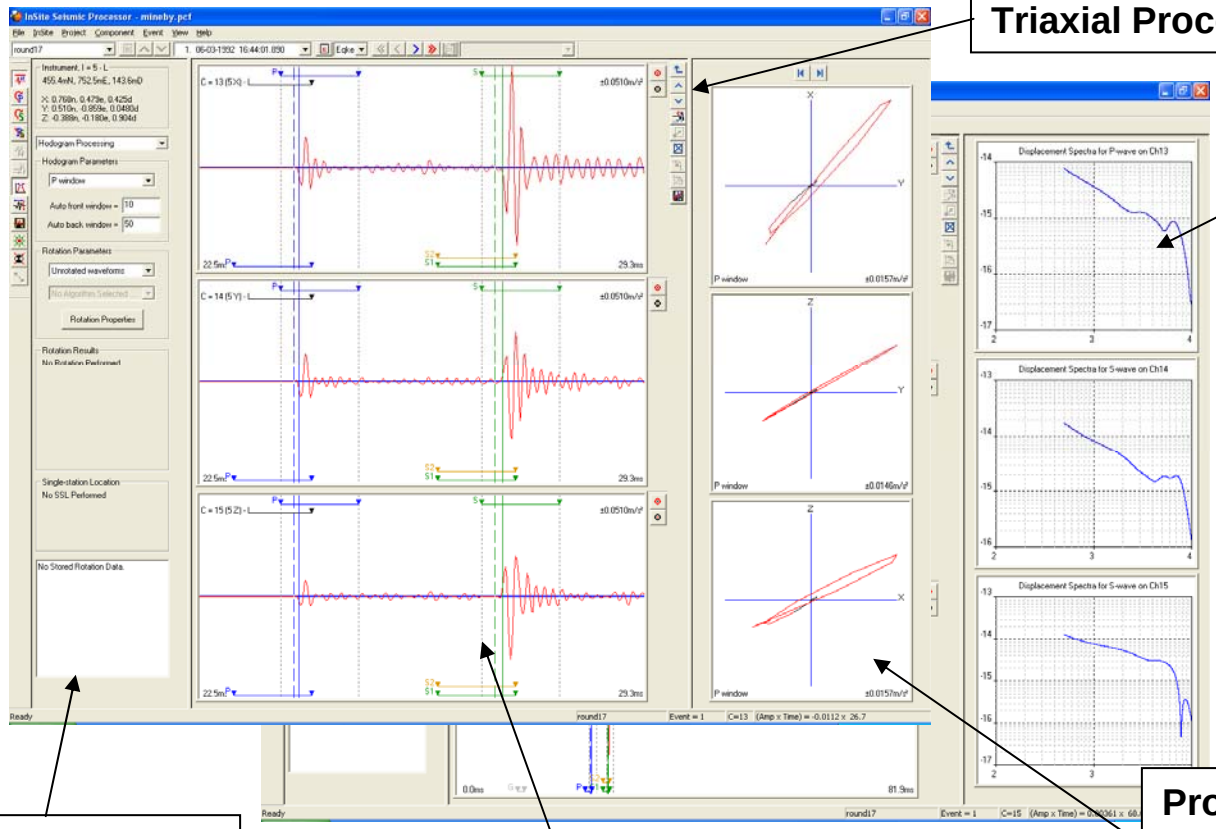
Advanced Waveform Module I



To access the Triaxial mode and view the Advanced Waveform Module click on this button in the channel processing bar



Advanced Waveform Module II



Triaxial Processing Bar

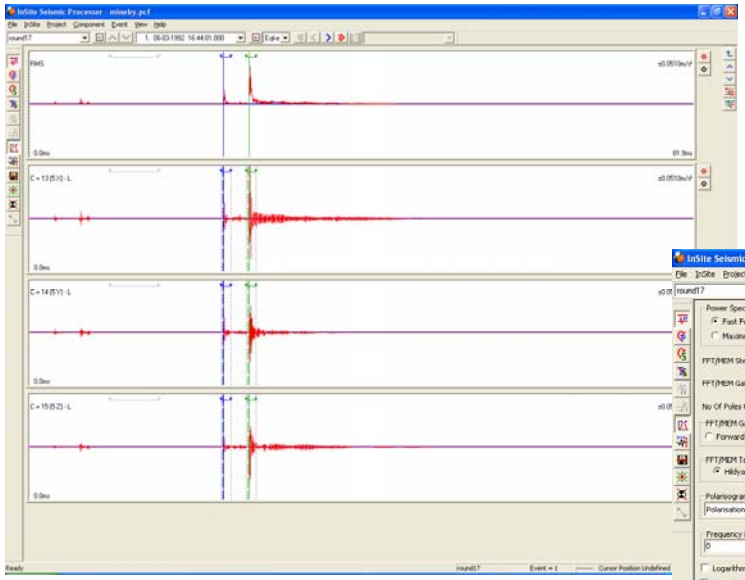
Processing Panel in Frequency Mode

Configuration and Results Panel

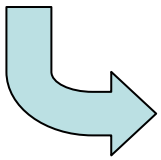
Waveform Panel

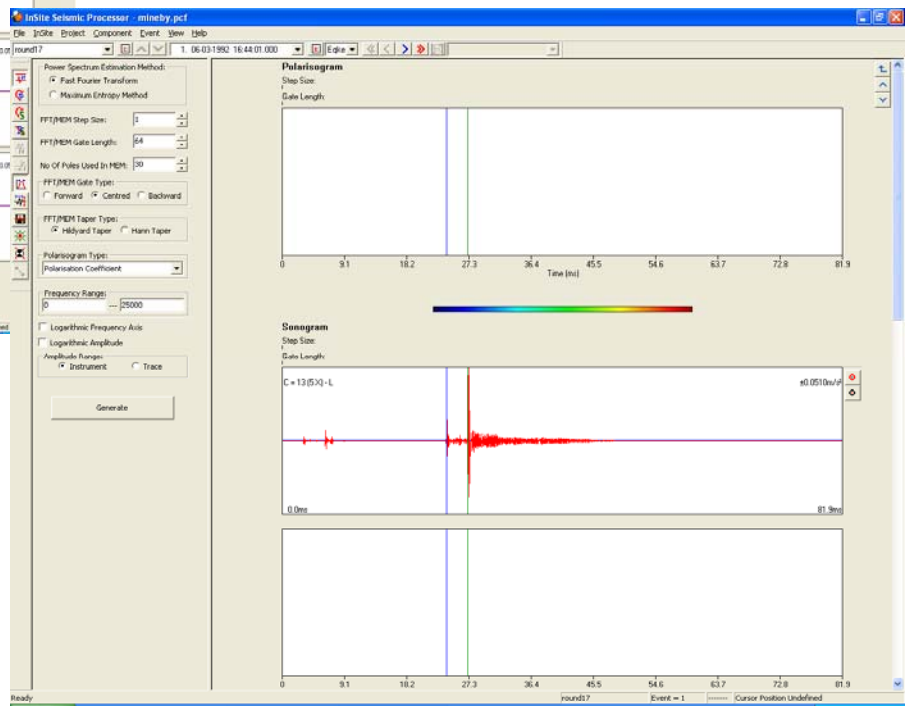
Processing Panel in Hodogram Mode

Advanced Waveform Visualiser III

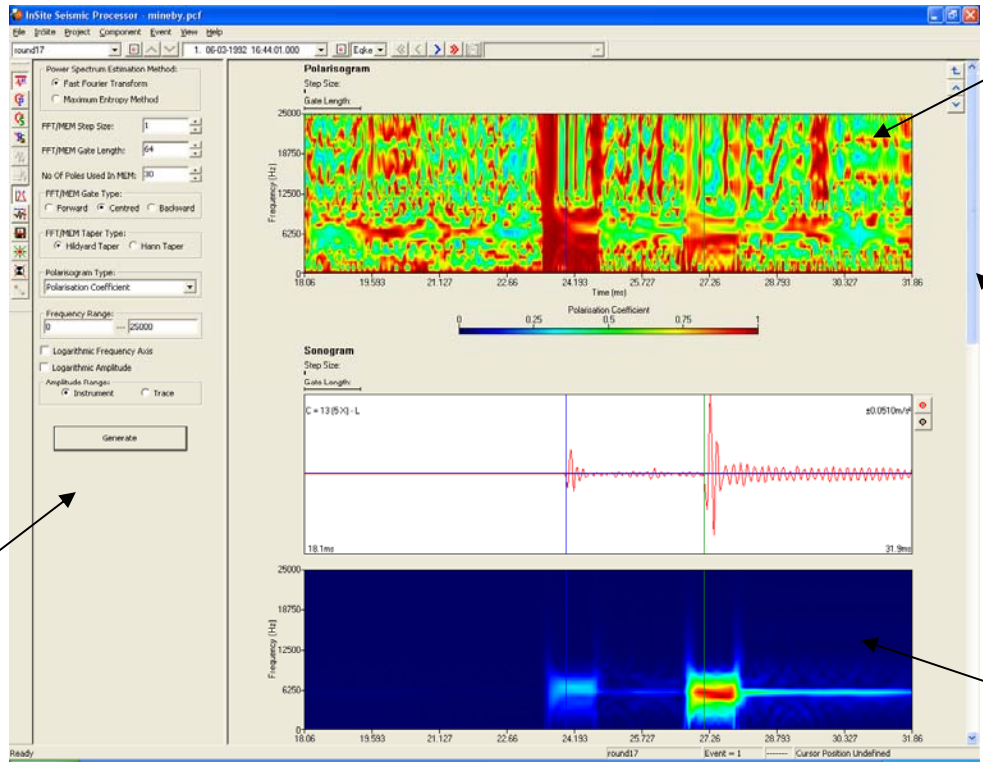


To access the Advanced Instrument and view sonograms and polarisograms click on this button in the channel processing bar





Advanced Waveform Visualiser IV



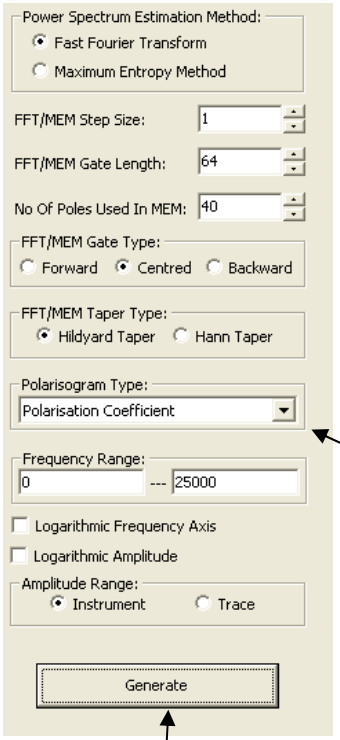
Polarisogram

Scroll down for sonogram of Channel 14 and Channel 15

Configuration Panel

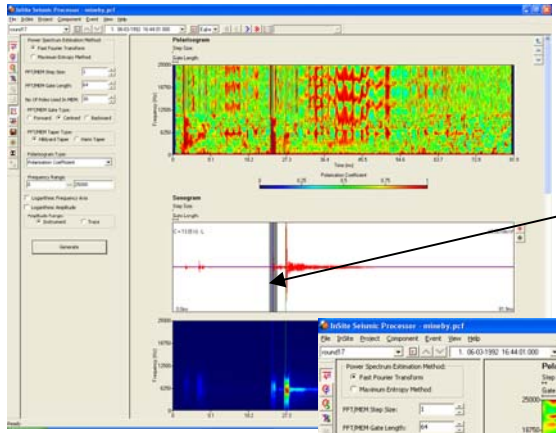
Sonogram for Channel 13

Advanced Waveform Visualiser V



Configuration panel contains controls for manipulating the display and processing functions

Experiment with different settings and press ‘Generate’. to see how the graphs change



Highlight a region on any waveform view for closer inspection