

EMpower Data Visualization Tools

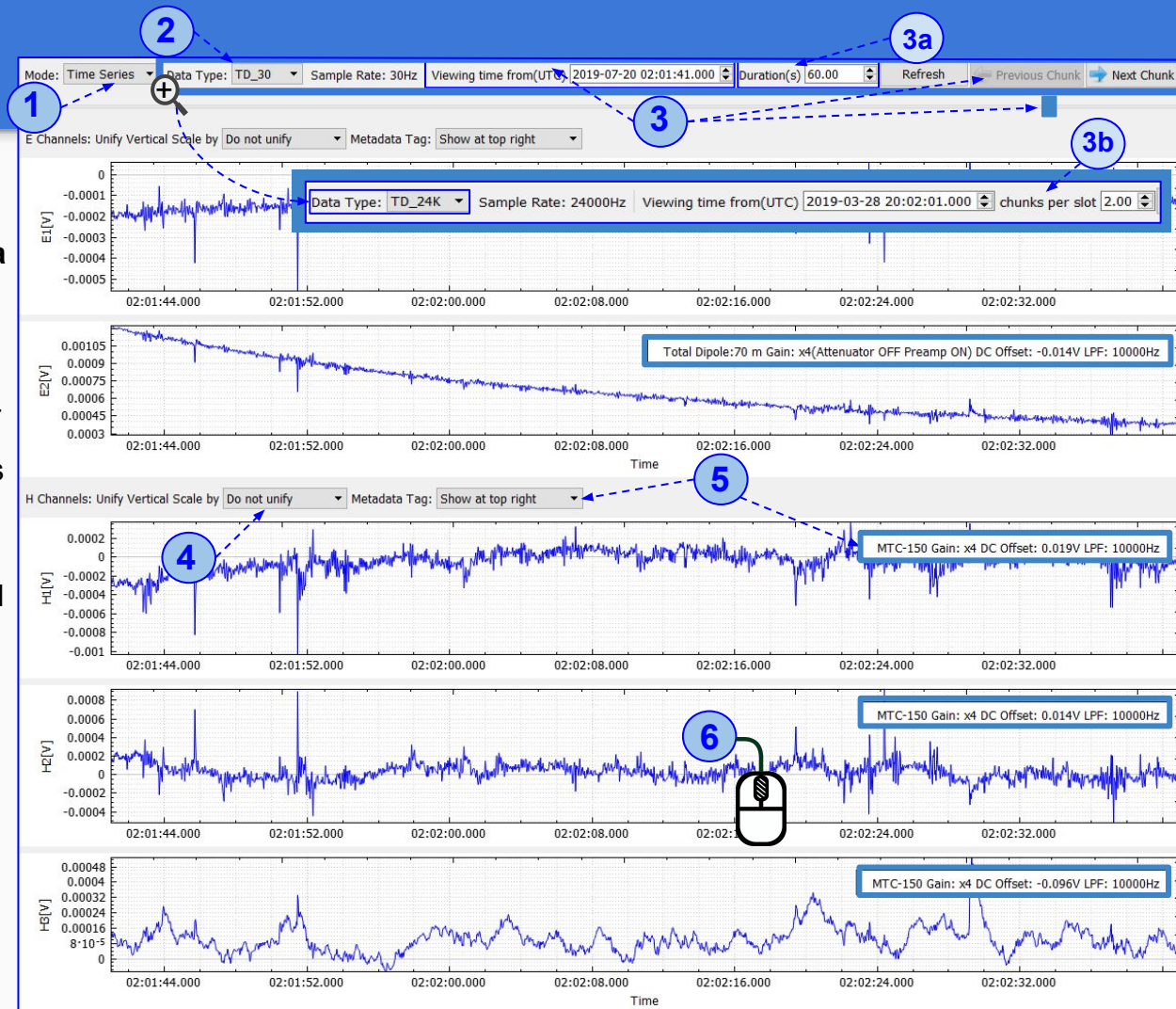


- Time Series and Spectra
- General Features
- Toolbar Description
- Processed PNT Data Plot
- Edit Cross Powers
- Polar Editor Features
- Time Series Editor Features

Time Series / Spectra

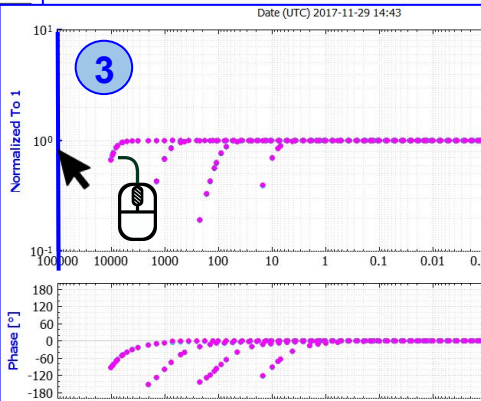
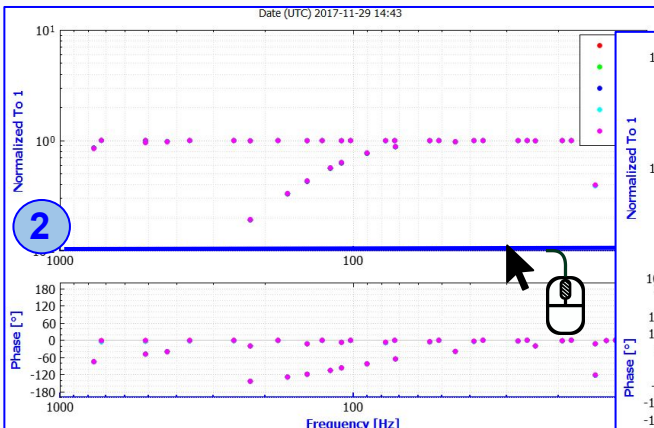
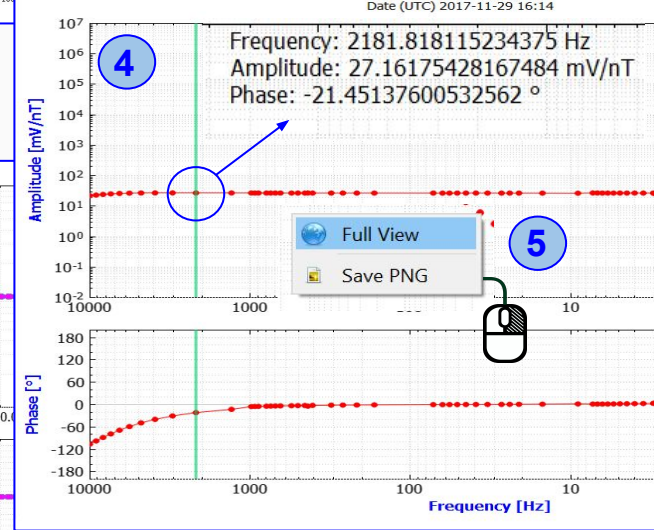
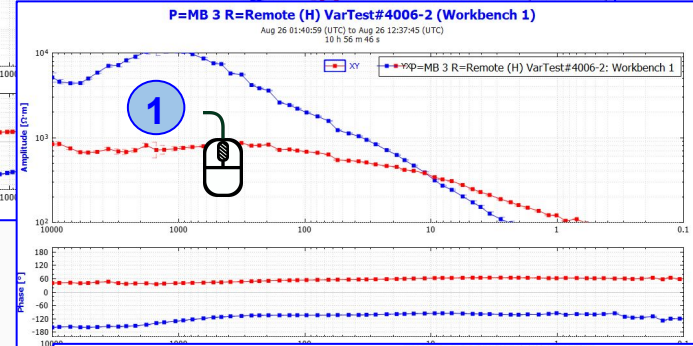
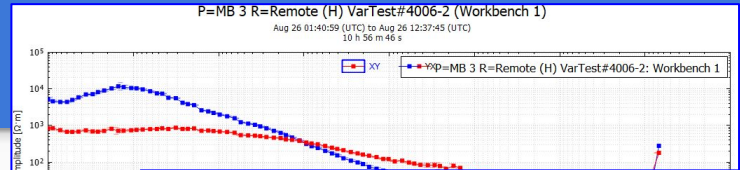
(Basic graphics)

1. Use the **Mode** drop-down list to switch between **Time Series** and **Spectra**
2. Select the **Sample Rate** using the **Data Type** drop-down list
3. Define the plot range start using **Viewing time from (UTC)**, the navigation buttons or the scroll selector
 - 3a. If viewing a continuous time series decimation level, define the view range length using the **Duration(s)** field
 - 3b. If viewing a sparse decimation level (i.e. TD_24) the length on the view will be on **chunks per slot**
4. Select scaling per plot using **Unify Vertical Scale** by
5. Use **Metadata Tag** to position the legend within the plot
6. Using the scroll wheel will zoom in or out in the X axis only.



General Features

1. Zoom in/out using the scroll wheel, this will zoom on the Y and X axis.
2. Clicking the X-axis (*highlighted in blue*) to zoom in/out using the scroll wheel will zoom on **X-axis** only.
3. Clicking the Y-axis (*highlighted in blue*) to zoom in/out using the scroll wheel will zoom on the **Y-axis** only.
**These features do not apply to Time Series and Spectra*
4. Click on a point to see information about the selected point (*use the arrow keys to move between points*). **This information may be different depending on the plot*
5. Right clicking on the plot, offers the options **Full View** or **Save PNG**



Toolbar Description

1. Error bars / Grid
 - Shows/hides error bars range
 - Grid icon scales the view to the error bars or to the plot
2. Print / Export to a CSV file
3. Amplitude (Log/Linear)
4. Frequency (Log/Linear)
5. Phase (Degrees/Radians)
6. Legend (Top right/left and Bottom right/left)

Toolbar available on:

- a. Processed Data tab
- b. Processing Queue

The screenshot displays the software interface with the following components:

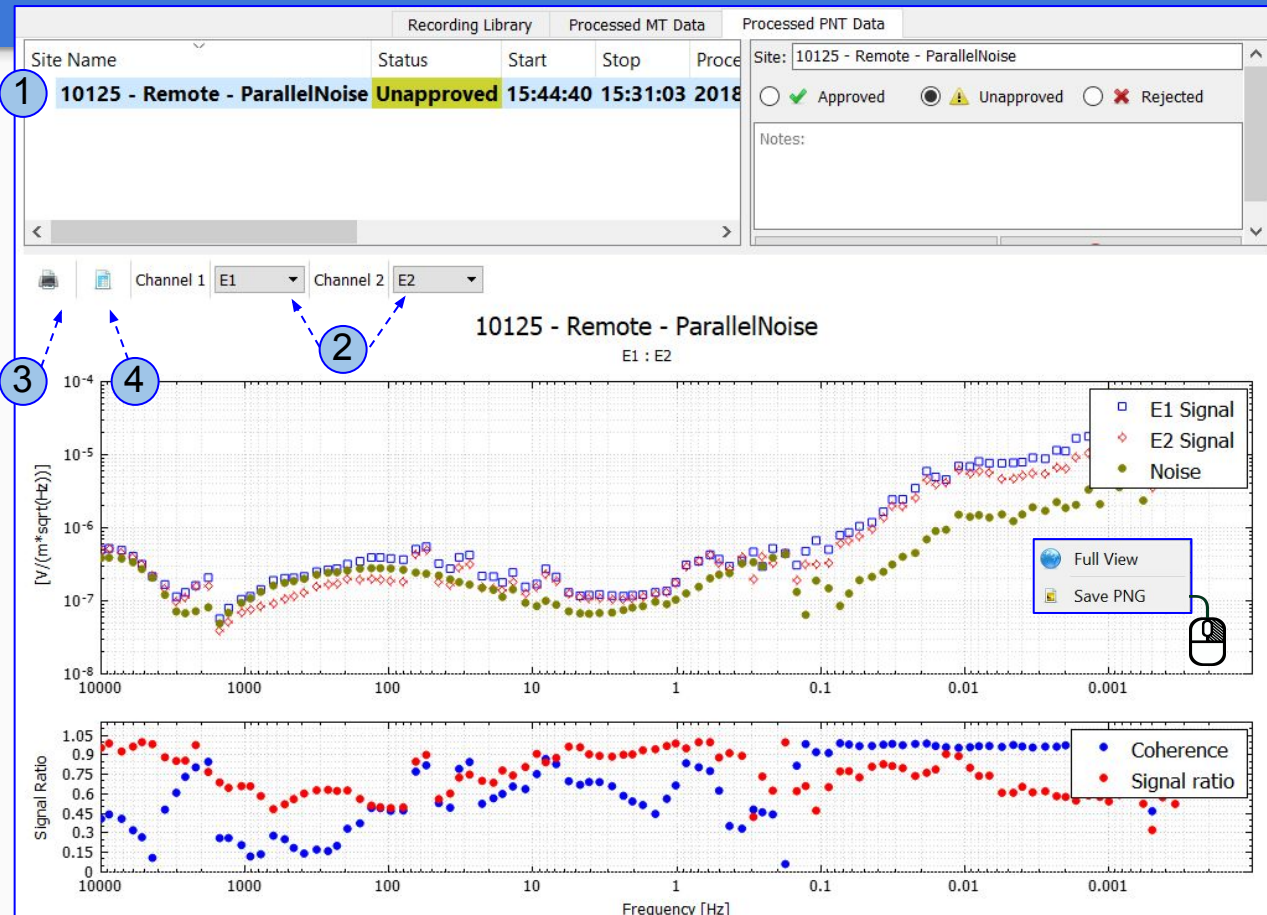
- Toolbar (Numbered 1-6):**
 - 1: Error bars / Grid (Grid icon)
 - 2: Print / Export to a CSV file (Print and Export icons)
 - 3: Amplitude (Log/Linear) (Radio buttons)
 - 4: Frequency (Log/Linear) (Radio buttons)
 - 5: Phase (Degrees/Radians) (Radio buttons)
 - 6: Legend (Top right/left and Bottom right/left) (Dropdown menu)
- Table (a):** A table showing processing status for various sites. The table has columns: Site / Workbench Name, Reference, Status, Filter / Geophysical Param, Progress, Elapsed Time, and Estimated Remaining Time.

Site / Workbench Name	Reference	Status	Filter / Geophysical Param	Progress	Elapsed Time	Estimated Remaining Time
P=S7_2_5C R= (Local H) (test1) - (Unedited)	Magnetic	None	Resistivity/Impedance	0%		
P=S7_2_5C R= (Local H) - (Workbench 3)	Magnetic	60Hz	Resistivity/Impedance	0%		
P=S7_2_5C R= (Local H) - (Workbench 2)	Magnetic	50Hz	Resistivity/Impedance	100%	4 m 43 s	0 s
- Plot (b):** A log-log plot titled "P=S1 MTU-5C (Unedited)" showing Amplitude [$\Omega \cdot m$] vs Frequency [Hz]. The plot includes data for XY (red squares) and YX (blue squares) components. The x-axis ranges from 10000 to 0.1 Hz, and the y-axis ranges from 10^{-2} to $10^7 \Omega \cdot m$. A secondary plot below shows Phase [$^{\circ}$] vs Frequency [Hz].

Processed PNT Data Plot

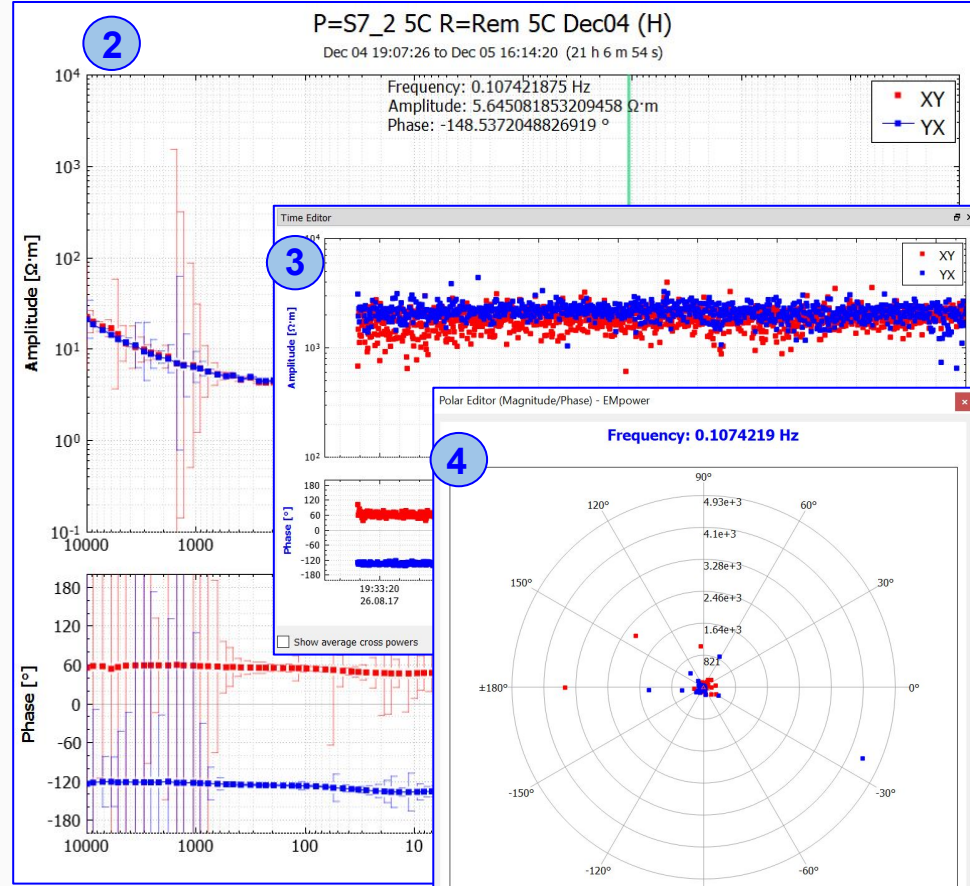
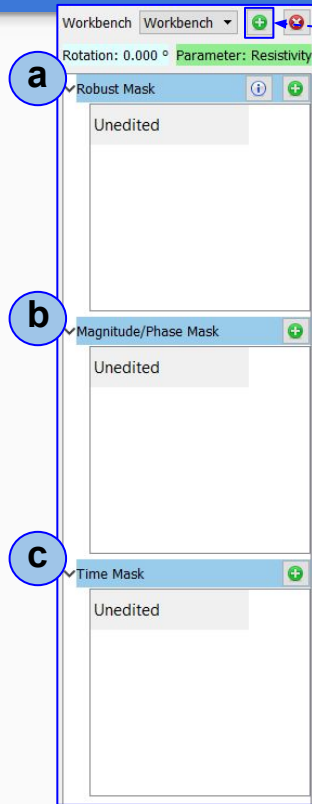
This tab shows the Parallel Noise recordings

1. Select the **Site**
2. Select the **Channels Signal** to be displayed
3. Control to **Print** the plot
4. Control to **Export** the values in CSV format



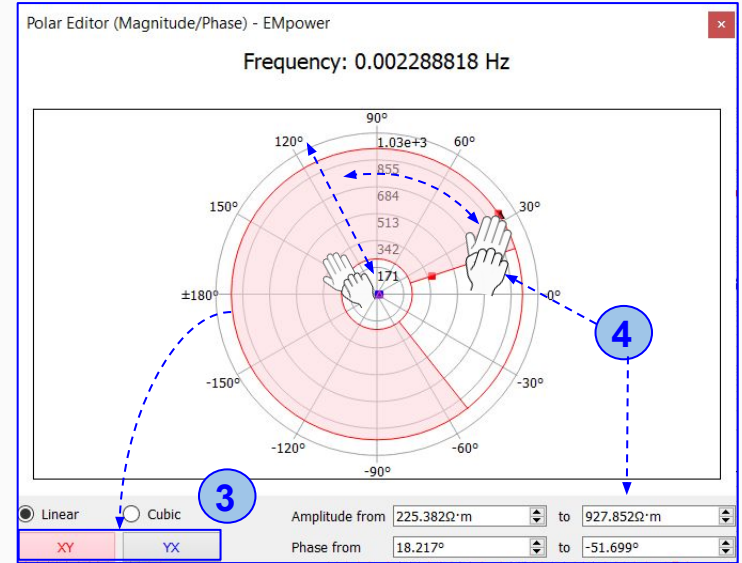
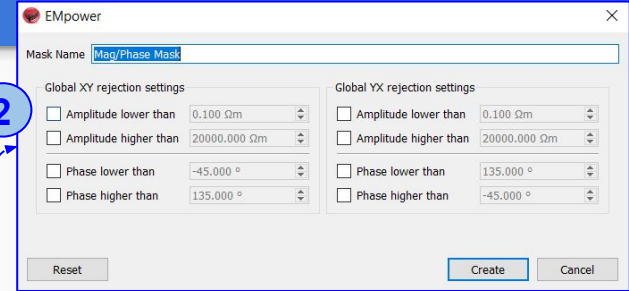
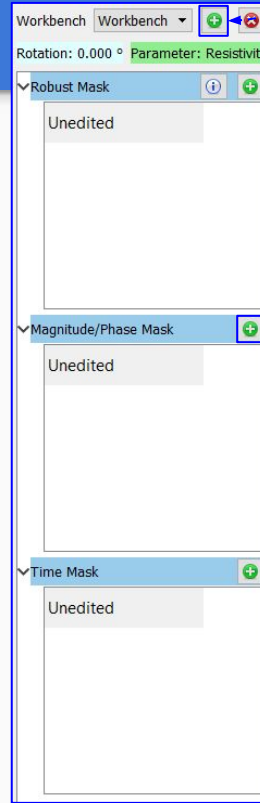
Edit Cross Powers

1. Workbench manager
 - Create a new workbench
 - Create masks for
 - a - Robust Mask
 - b - Polar Editor
 - c - Time Editor
2. From the resultant plot (*select a frequency*)
3. Time Editor (shows how data changes over time)
4. Polar Editor (*Expressed in polar coordinates, with radius as a function of angle*)



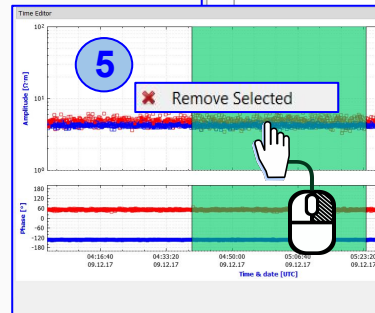
Polar Editor Features

1. Create a new Workbench
2. Create a new Mask for the Polar Editor
 - Adjust the Global **XY** and **YX** rejection settings as needed
3. Choose a Frequency and select from the **Linear** or **Cubic** views
4. Click **XY** or **YX** button to switch between ranges. Edit the ranges by either dragging the handles with your mouse or manually entering values into the spin boxes. (see the [Crosspower Editor](#))



Times Editor Features

1. Create a new **Workbench**
2. Create a new **Mask** for the **Time Editor**
3. To Add a New rejection area
 - Click the a **Add New Section** button
 - Select the area by dragging the handles with the mouse to the right or left.
4. Right-click to delete the selection



Workbench Workbench

Rotation: 0.000 ° Parameter: Resistivity

Robust Mask Unedited

Magnitude/Phase Mask Unedited

Time Mask Unedited

2

