

# EMpower Data Visualization Tools

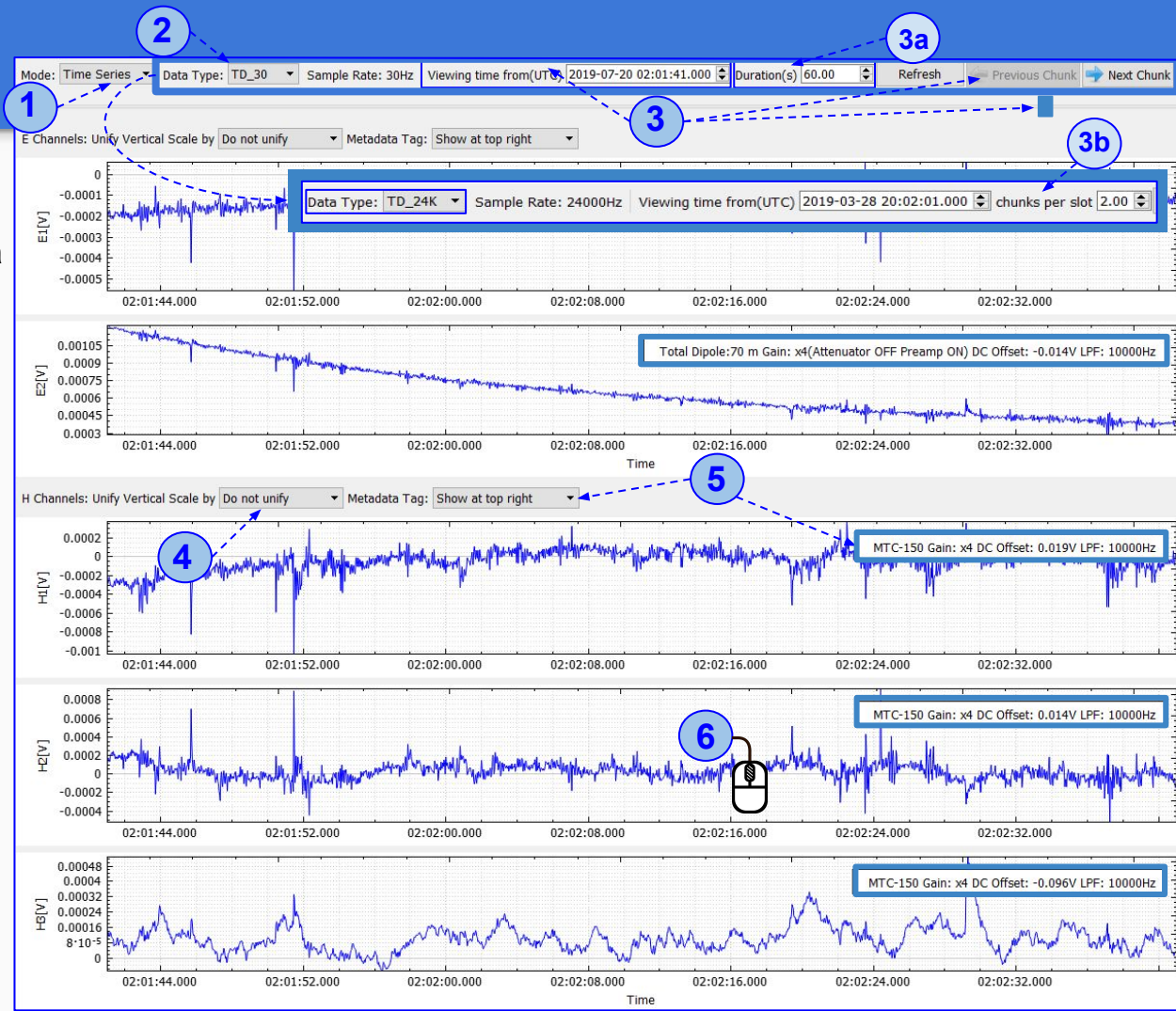


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# Time Series / Spectra

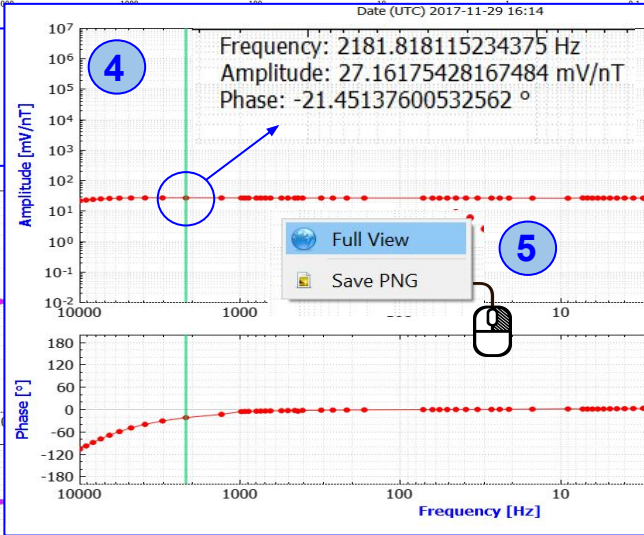
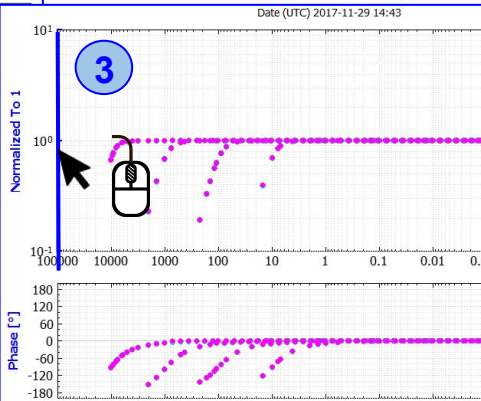
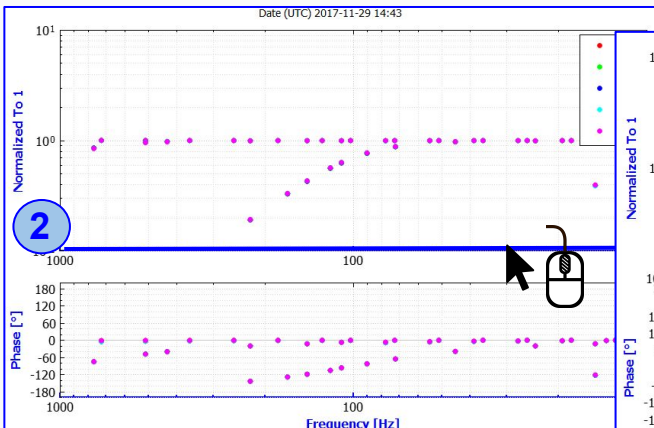
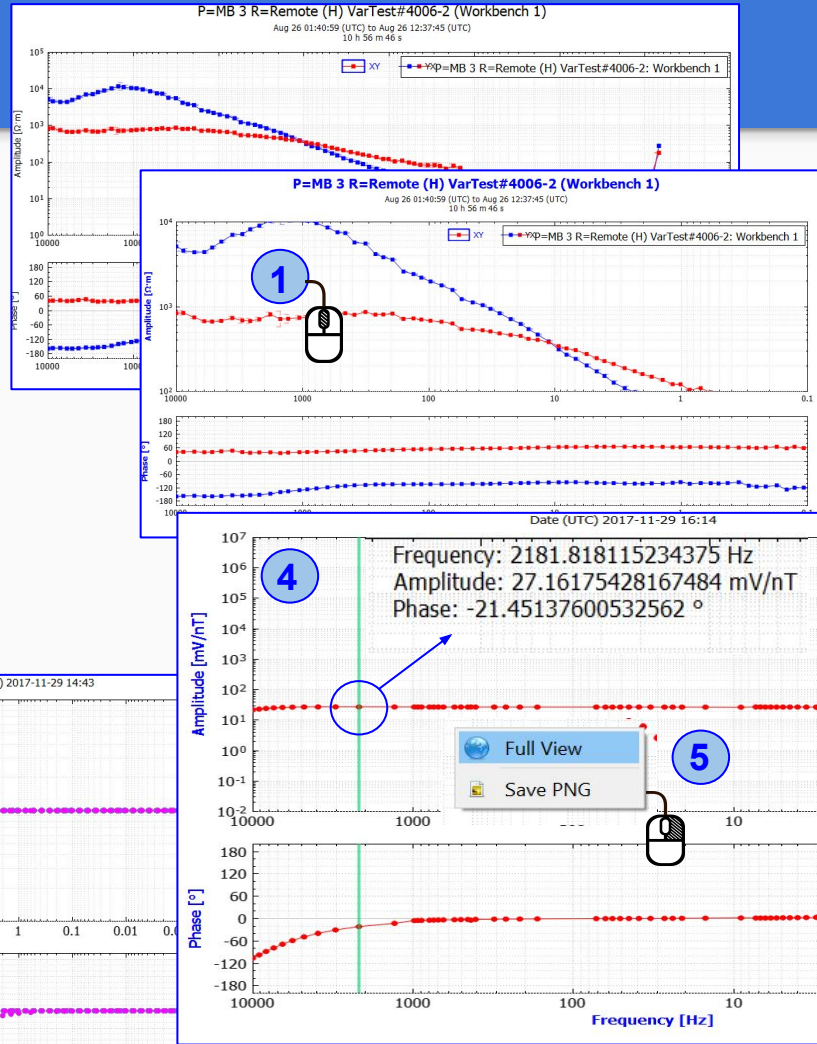
(Basic graphics)

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 )

The screenshot displays the software interface with a toolbar at the top and a main window below. The toolbar is divided into six numbered sections:

1. Error bars / Grid: Contains icons for showing/hiding error bars and a grid icon.
2. Print / Export to a CSV file: Contains icons for printing and exporting to CSV.
3. Amplitude (Log/Linear): Contains radio buttons for selecting the amplitude scale.
4. Frequency (Log/Linear): Contains radio buttons for selecting the frequency scale.
5. Phase (Degrees/Radians): Contains radio buttons for selecting the phase scale.
6. Legend (Top right/left and Bottom right/left): Contains a dropdown menu for selecting the legend position.

The main window shows a list of sites and a processing queue. The processing queue table is as follows:

Processed Site Name	Reference	Status	Progress	Elapsed Time	Estimated Remaining Time
P=S1 MTU-5C	Magnetic	Done	100%	4 m 43 s	0 s

The main window also displays a plot of Amplitude [Ω·m] versus Frequency [Hz] for the site P=S1 MTU-5C. The plot shows two data series: XY (red squares) and YX (blue squares). The amplitude ranges from 10<sup>-2</sup> to 10<sup>7</sup> Ω·m, and the frequency ranges from 10000 to 0.1 Hz. The plot is a log-log plot. The legend is located in the top right corner of the plot area.

Toolbar available on:

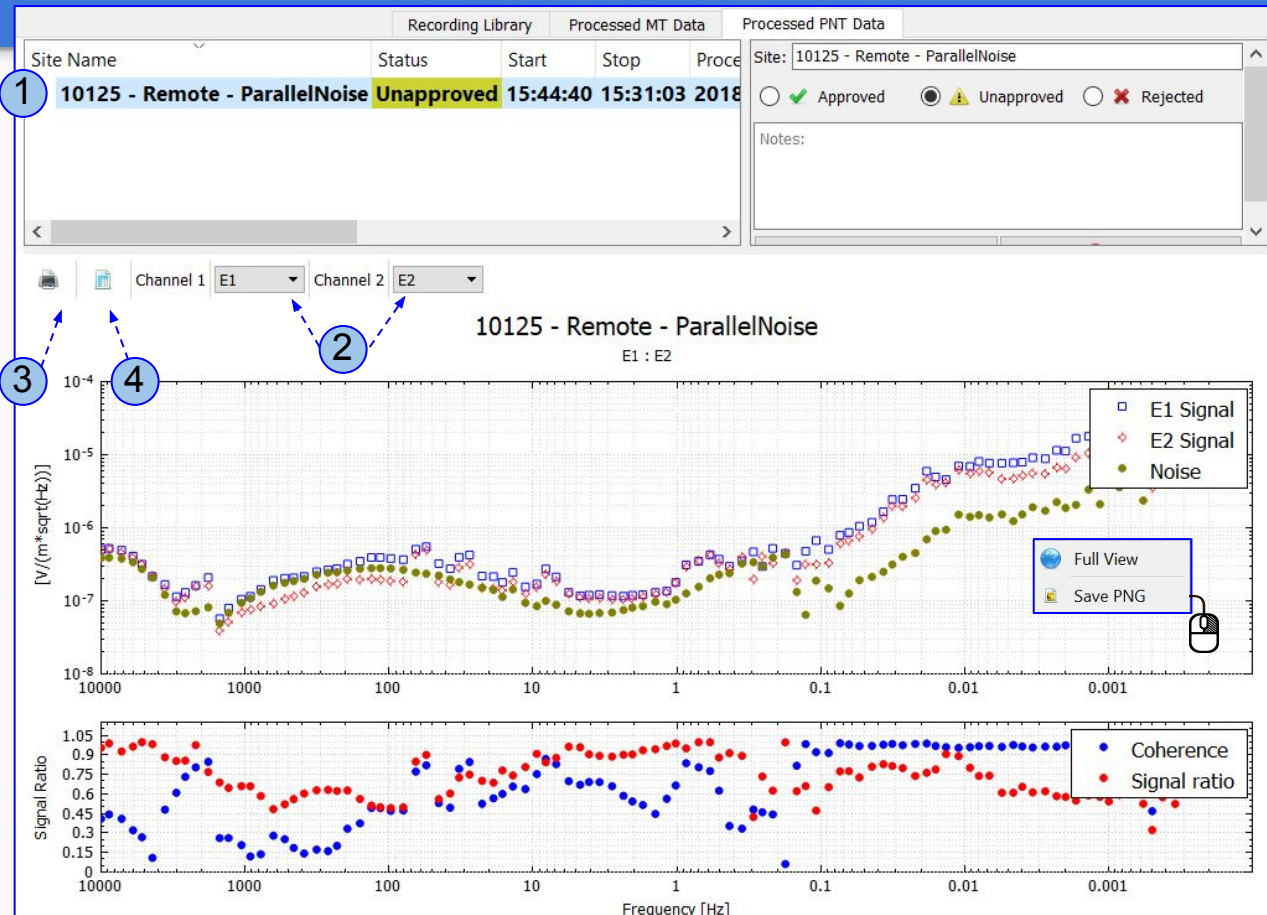
- a. Processed Data tab
- b. Processing Queue



# Processed PNT Data Plot

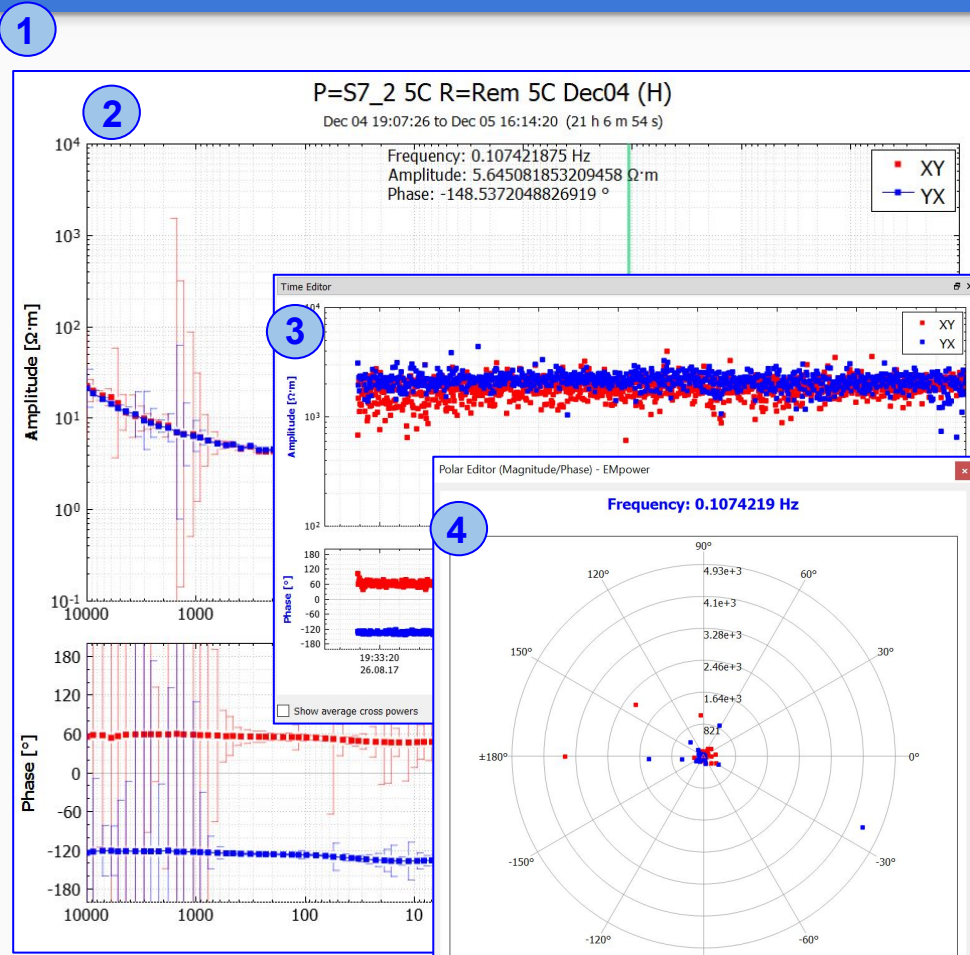
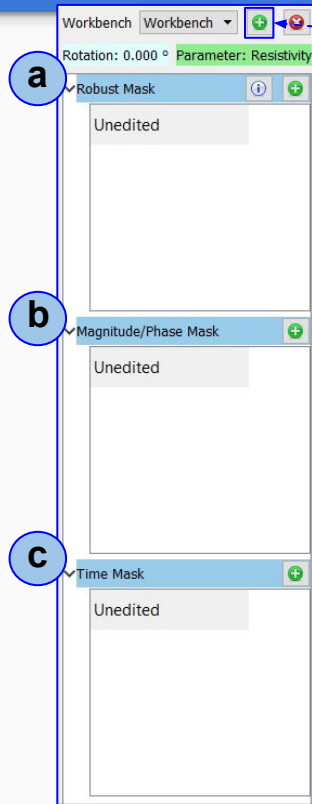
This tab shows the Parallel Noise recordings

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



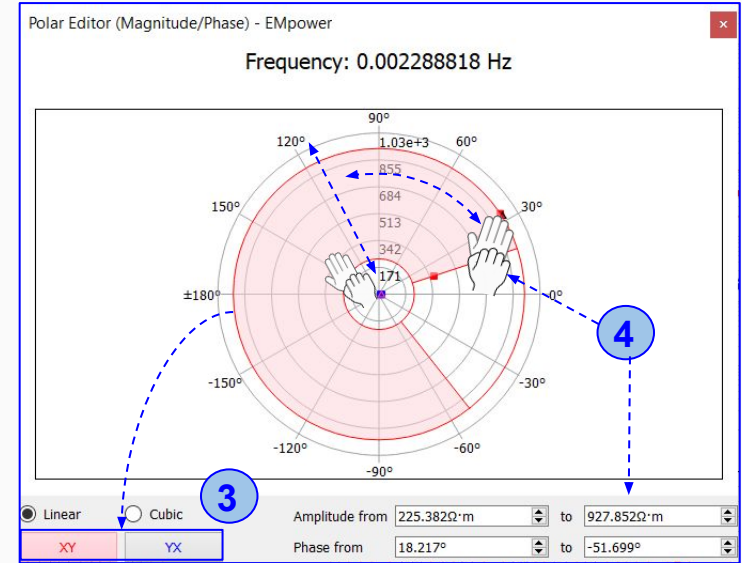
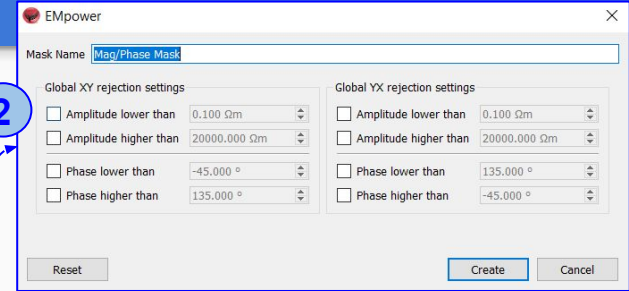
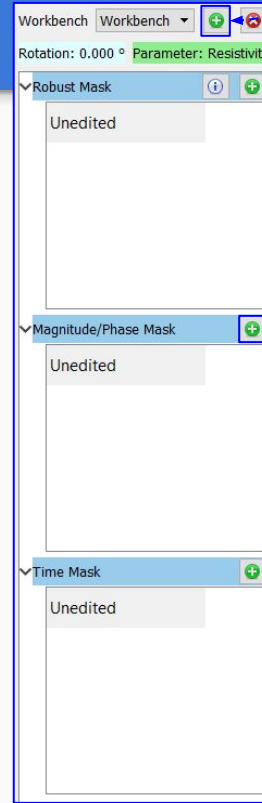
# Edit Cross Powers

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

