EMpower Data Visualization Tools

PHOENIX GEOPHYSICS

Version: 250912 ID: DAA14

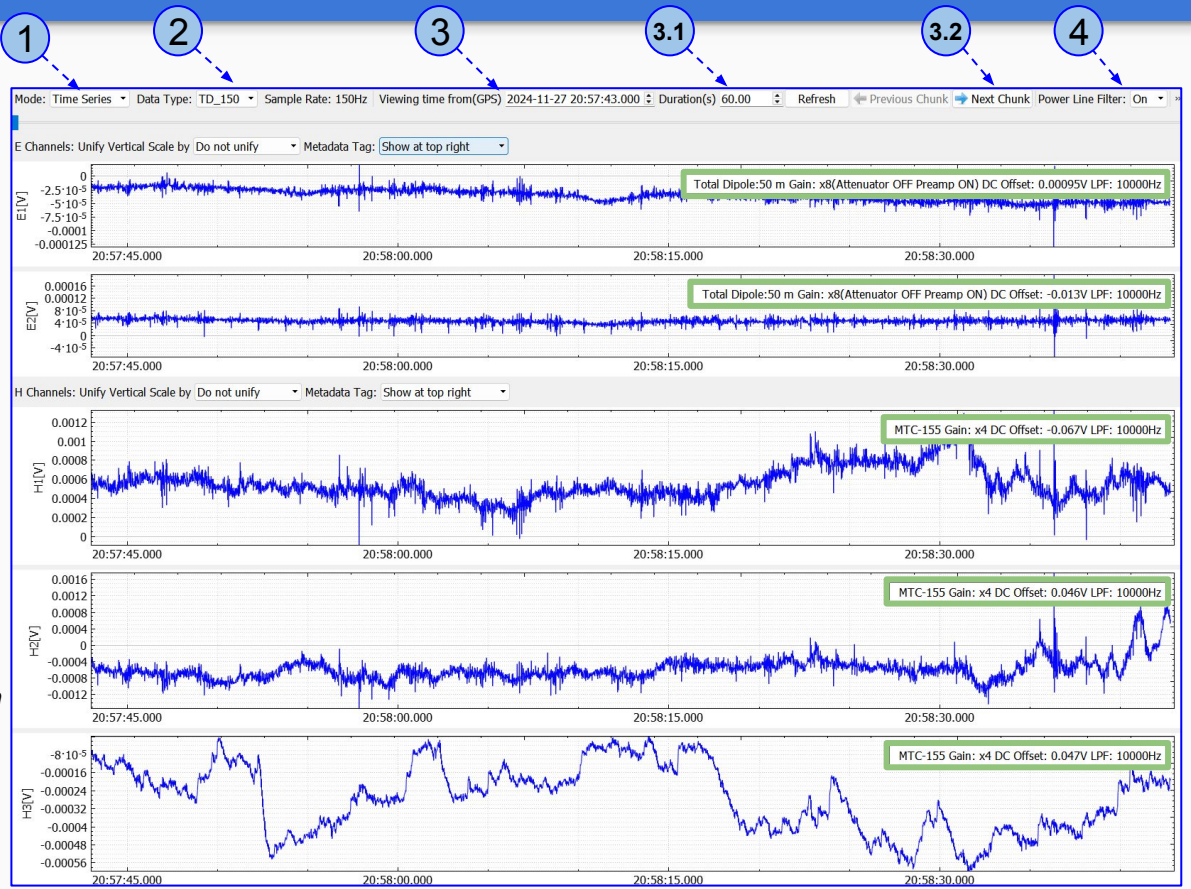
Time Series and Spectra Viewers

Time Series and Spectra plots are available in Field QC and Manage modules

1. Select the **Mode**
   - **Time Series** viewer
   - **Spectra** viewer
2. Select the **Data Type** (e.g.)
   - **TD_24** *(Sample Rate: 24000 Hz =24000 sps)*
   - **TD_150** *(Sample Rate: 150 Hz =150 sps)*

**Data Type list will be different, depending on the Sampling mode and rate selected for the config file.*

3. Use **Viewing time from (GPS)** to specify the starting time of the plot range
   - **3.1.** Specify the length of the viewing range using the **Duration** field.
   - **3.2.** Use **chunks per slot** navigation buttons to visualize a sparse decimation level *(the length of each chunk is equal to the specified duration)*
4. **Power Line Filter** *(see Page 4)*



Time Series and Spectra Viewers

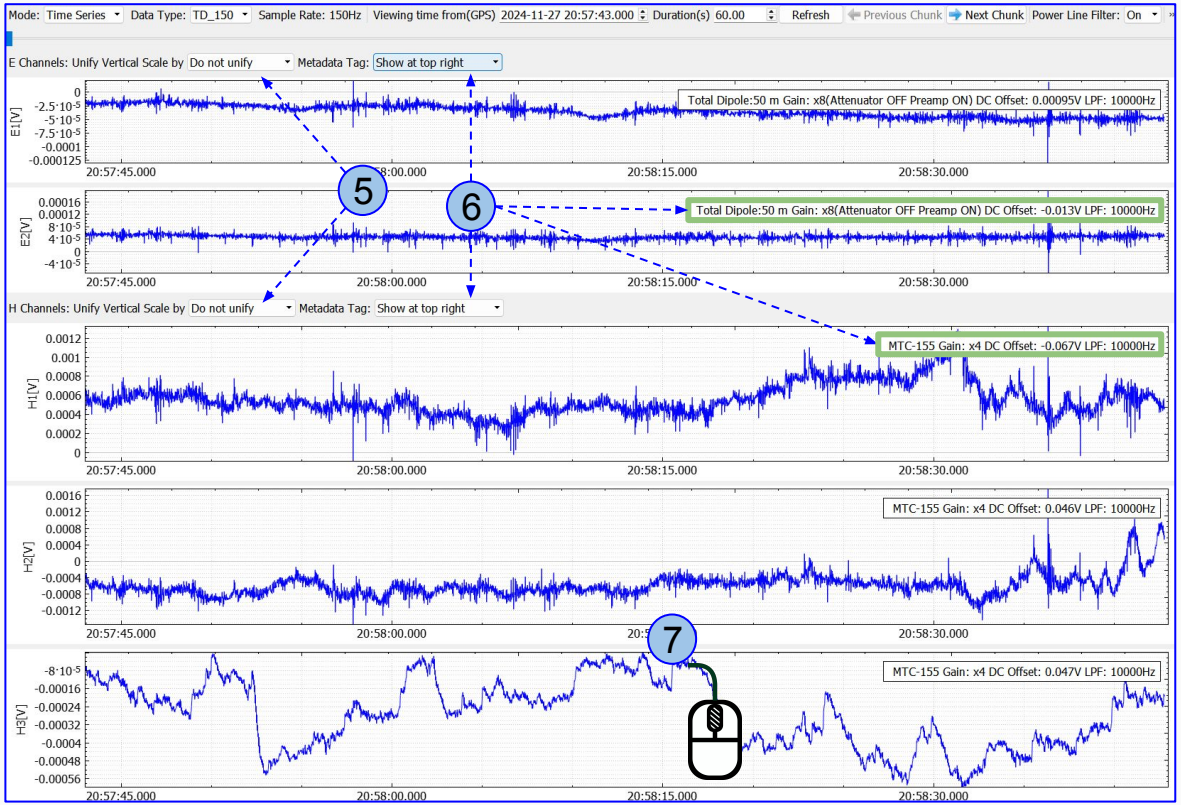
5. Use **Unify Vertical Scale by**, to choose the desired plot(s) scale
    - **Do not unify**

To compare channels, prefer

- **Full data range** of Electric or Magnetic channels
- **Range of** specific Electric or Magnetic channel

6. Use **Metadata Tag** to position the legend within the plot

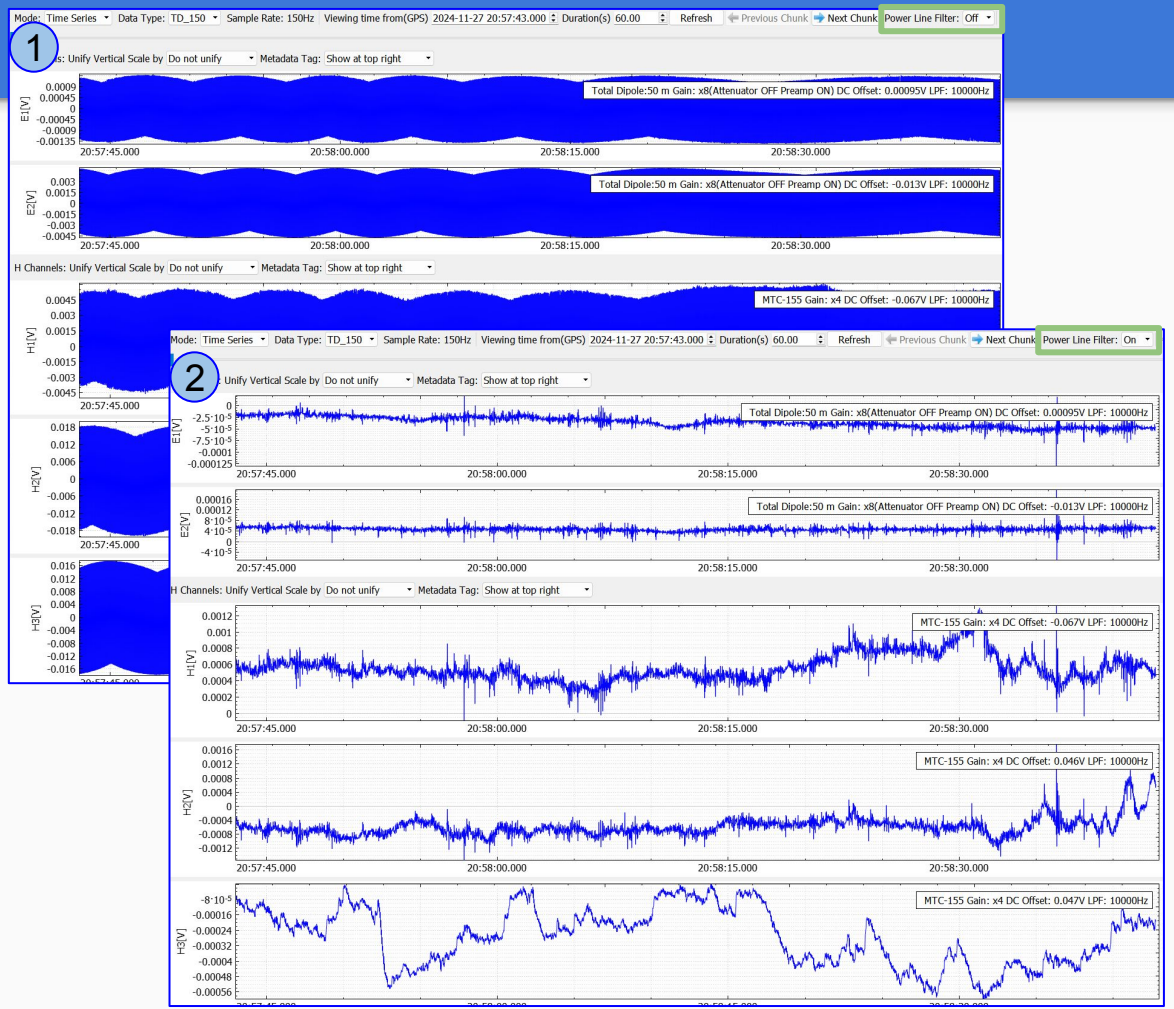
7. Use the scroll wheel to zoom in or out the **X** axis.



Power Line Filter

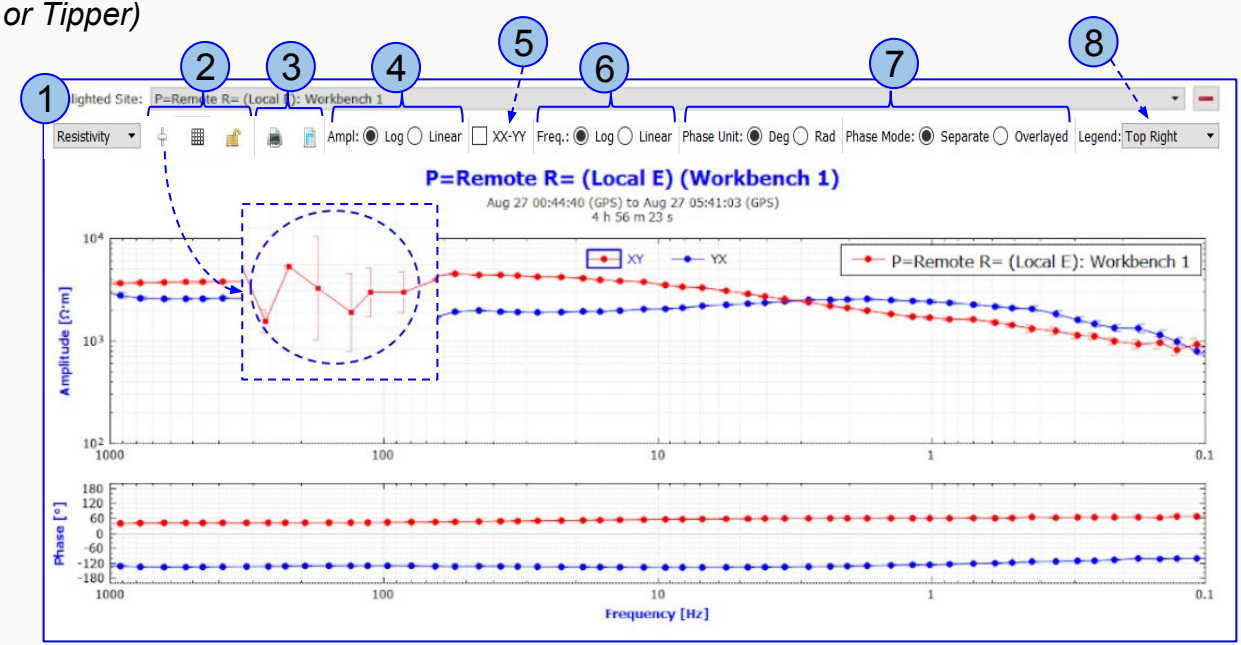
Power line filter removes 50 and 60 Hz power line signal and some of its harmonics from time series. This helps visually enhance the natural MT signal when observing data heavily polluted by power line noise.

1. Image of polluted data with the power line filter turned off, acquired in a location where strong power line noise is present.
2. Image that shows the same data with the power line filter turned on, significantly reducing noise and revealing the natural signal more clearly.



Navigating the Toolbar

1. Parameter type *(Resistivity, Impedance or Tipper)*
2. Visualization tools
   - **Show/Hide** the error bars
   - **Scale** to the error bars range
   - **Lock/Unlock** the current scale
     - Zoom in/out to the desired scale
     - Click on the lock icon to lock the scale to
     **The lock state applies to all sites*
3. **Print** the current plot or **Export** to a CSV file
4. **Amplitude** (Log/Linear)
5. **XX-YY** Off-Diagonal components
6. **Frequency** (Log/Linear)
7. **Phase**
   - **Unit**: Degrees/Radians
   - **Mode**: Separate/Overlayed
8. **Legend** *(Top right/left and Bottom right/left)*



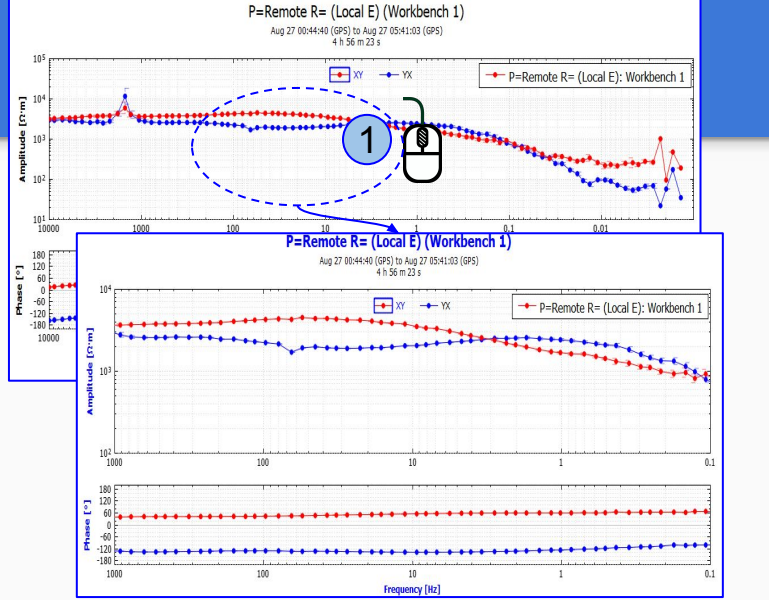
Toolbar navigation applies to:

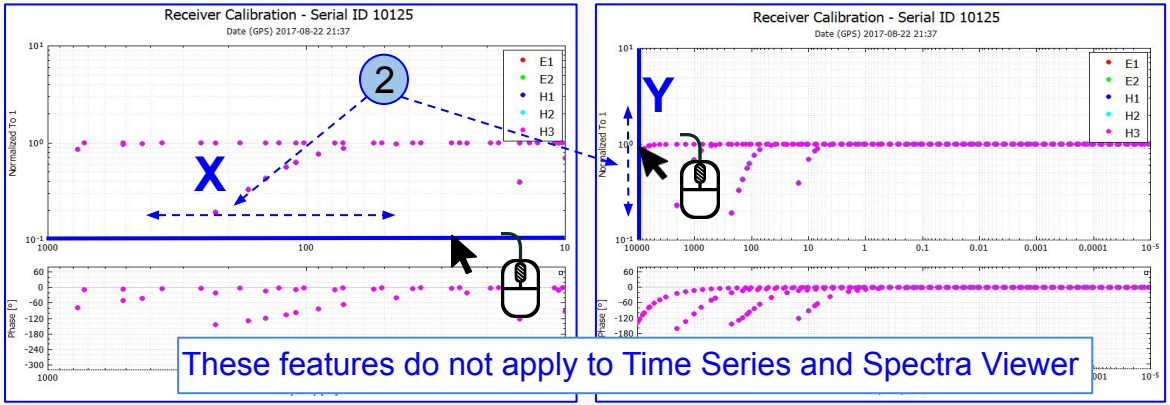
- Processed Data tab
- Processing Queue
- Processed CSAMT data tab

Plots Features

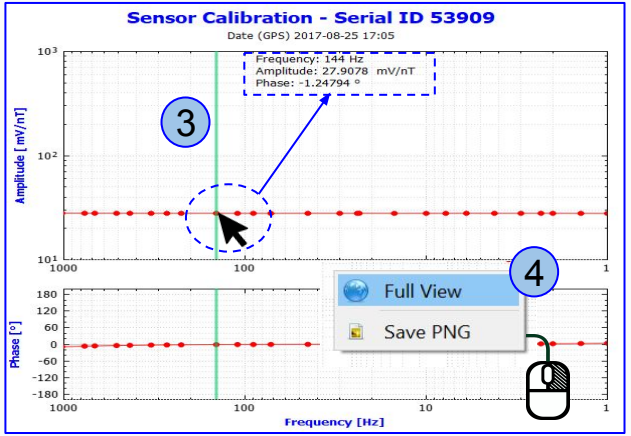
These functionalities are valid for every plots in Field QC and Manage modules.

1. Use the scroll wheel to zoom in/out on the X and Y axes.
2. Click on the X or Y axis to **highlight the axis in blue,** and use the scroll wheel to zoom in or out the **X or Y axis**.
3. Select a point on the plot to display its Frequency, Amplitude and Phase value *(use the arrow keys to change the frequency)*.
4. Right click on the plot to choose **Full View** or **Save PNG** options.





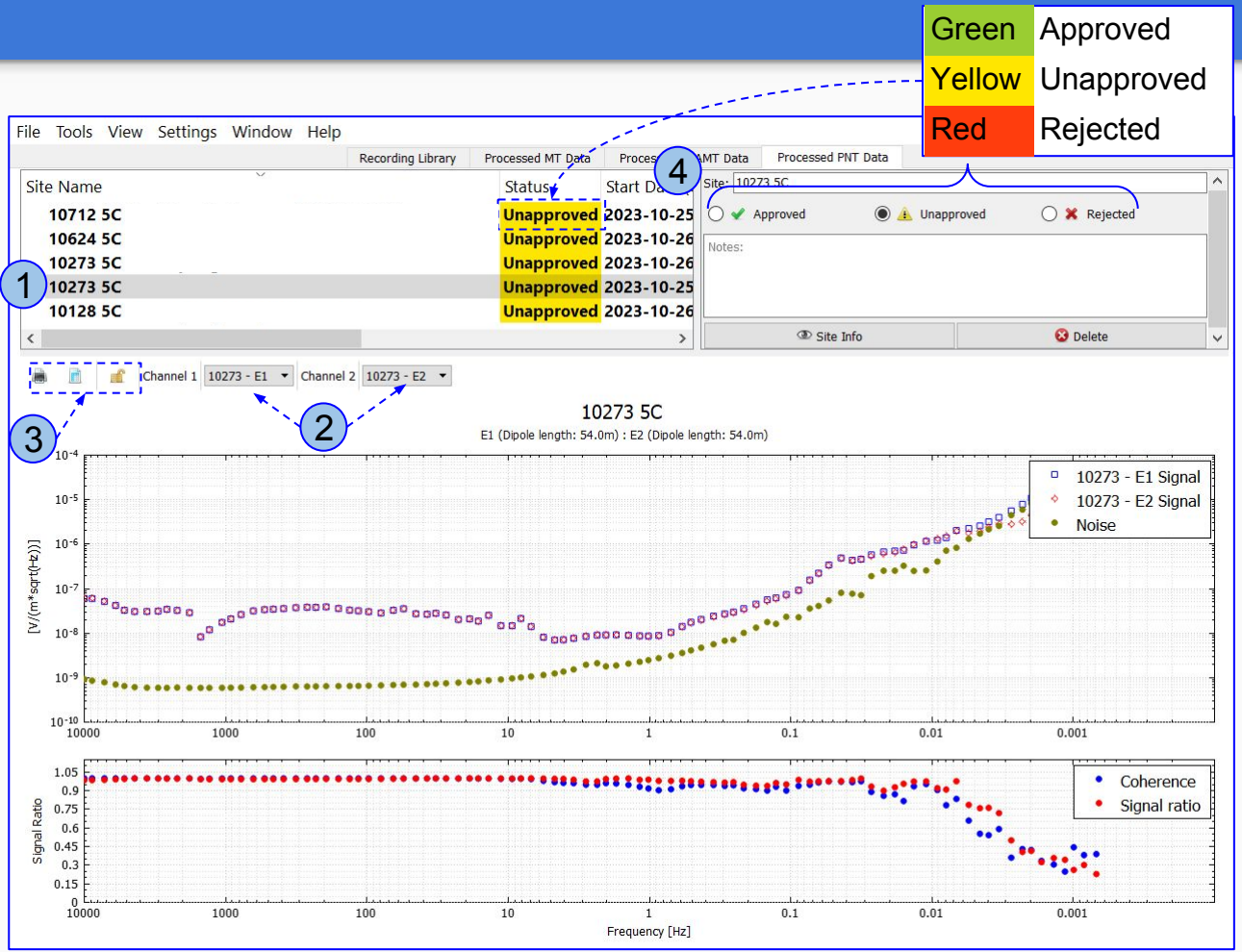
These features do not apply to Time Series and Spectra Viewer



Processed PNT Data tab

This tab shows the Parallel Noise (PNT) processed sites

1. Select the **Site**
2. Select the **Channels Signal** to be displayed
3. Tools *(see page 5)*
   - **Print**
   - **Export**
   - **Lock/Unlock**
4. Site **Status**

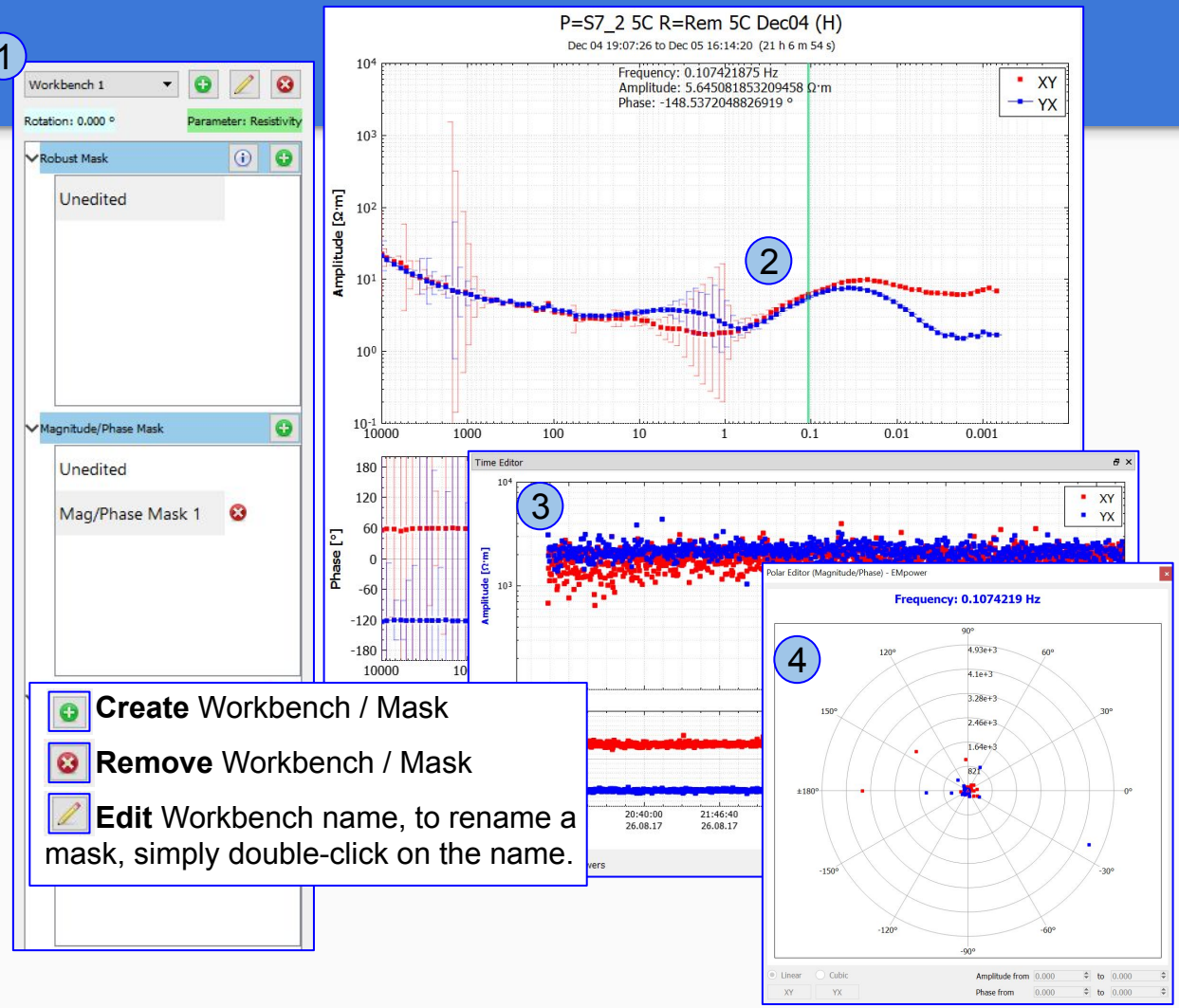


Crosspower Editor

Processed MT Data

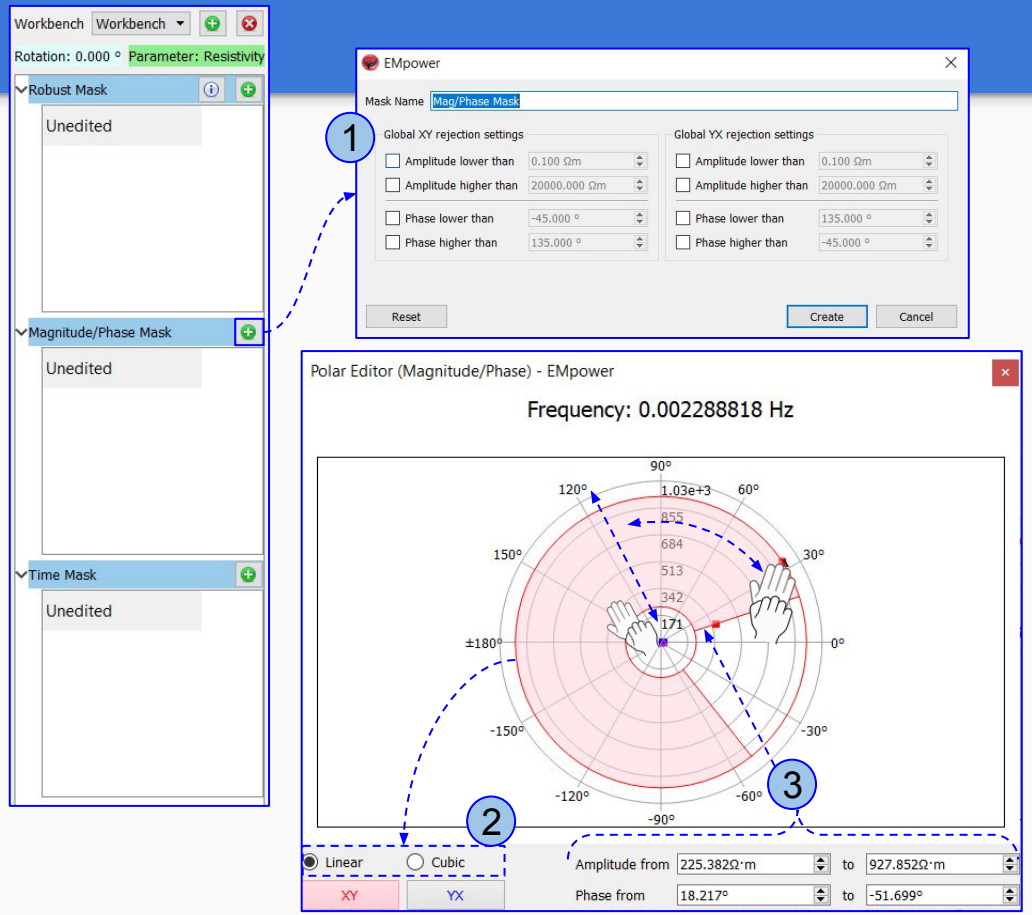
1. Each **Workbench** can contain multiple masks. The main plot will update as crosspower is added or removed from the selected mask
2. From the amplitude plot, select a **Frequency** to edit it
3. **Time Editor**, displays Amplitude/Phase crosspowers over time
4. **Polar Editor**, displays the crosspowers in two ways, Linear or Cubic

For more details, consult the DAA16 Crosspower Editor manual



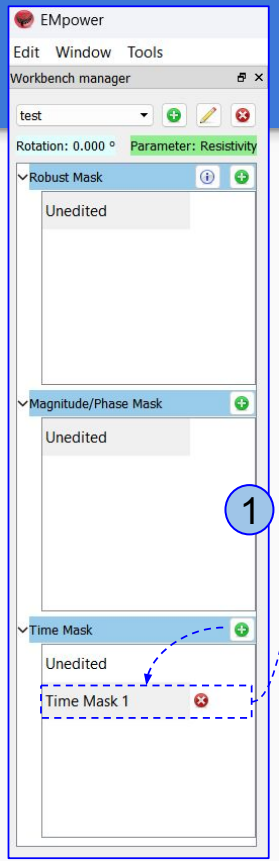
Polar Editor Features

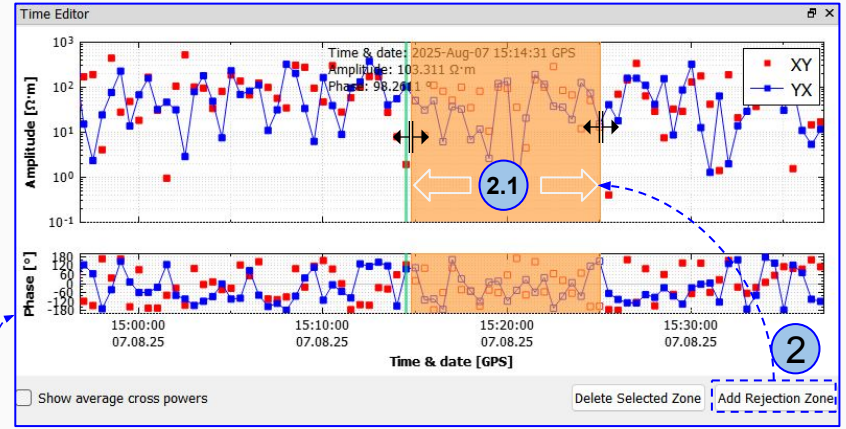
1. Create a new **Mask** for the **Polar Editor**
   - Adjust the **XY** and **YX** rejection settings as needed
2. Select a **Frequency** and choose **Linear** or **Cubic** view
3. Click XY or YX button to switch between modes. Edit the ranges by either dragging the handles with the mouse or by manually entering values into the spin boxes. *(see the [DAA16 Crosspower Editor manual])*

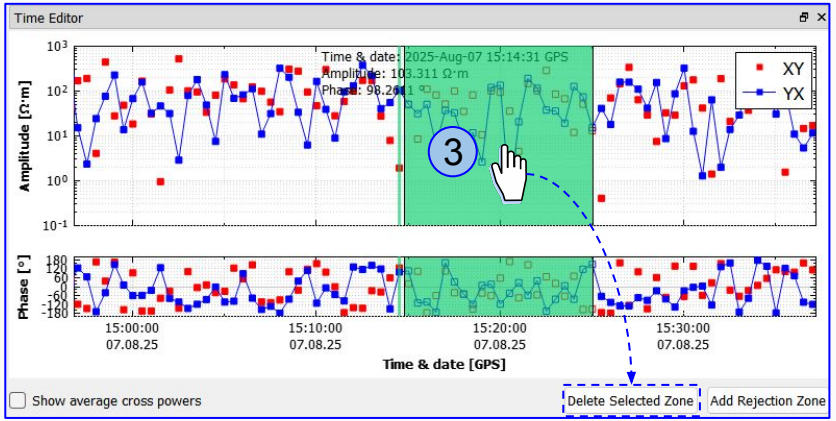


Time Editor Features

1. Create a new **Mask** to activate the **Time Editor**
2. Add a rejection area by clicking the **Add Rejection Zone** button
   - **2.1.** Define the area by dragging the handles with the mouse to the right or to the left. Repeat the process as needed.
3. To delete a section, simply select the area, and click **Delete Selected Zone**







Technical Support

Please check out the FAQs
https://phoenixgeophysics.freshdesk.com/
Or email us at: *support@phoenix-geophysics.com*