

# ACE3P Macros for ParaView

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ParaView has the capability to load user macros written in Python.

ACE3P has provided the following macros for processing of simulation results from different modules.

## T3P:

**wakeplot.py** – plot wakefield and impedance

**timeFFT.py** – plot time signal and its Fourier transform normalized to current spectrum

**fft.py** – Fourier transform of time sequence (default file name t3p\_results/OUTPUT/point.out)

## Track3P:

**enhancement.py** – plot enhancement counter for multipacting

**resonant\_location.py** – display resonant particle information

**resonant\_lineplot.py** – display resonant particle information

**trajectory.py** – display trajectories of individual particles

*Note: The macros work for ParaView 5.11.0 version.*

# Manipulating Macros in ParaView

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## Loading Macros

- Download ACE3P macros to a directory
- In ParaView, click *Macros* -> *Add new macro ...* from the directory
- Load the macros one by one

## Editing Macros

- In ParaView, click *Macros* -> *Edit*, and choose a macro
- Some macros require reading files from a directory, so change the file location as, for example,

*For Mac or Linux*

*in\_filename = "/Users/abc/Desktop/example/t3p\_results/OUTPUT/wakefield.out"*

*For Windows*

*in\_filename = "c:/Users/abc/Desktop/example/t3p\_results/OUTPUT/wakefield.out"*

- If ParaView is opened from the directory containing the results, there is no need to change the file location by just specifying, for example,  
*in\_filename = "./t3p\_results/OUTPUT/wakefield.out"*