

NAME

`wfampls` – export and plot waveform amplitudes for normalized cycles in runs

SYNOPSIS

wfampls [-c wfnum] [-w wfnum,...] runfile ...

DESCRIPTION

Wfampls extracts waveform amplitude data from the specified *runfiles* and stores it as comma-separated values, as well as plotting these waveform amplitudes as HPGL plot files.

For each specified run, it produces a file (using the run name with "**-wfa.txt**" appended) that exports the waveform amplitudes for all waveforms specified by the `-w` option. (These waveform numbers should be separated by commas, but must all be in a single command-line argument, so no spaces unless the whole list is within quotes.) The file is a number of lines of comma-separated values, with the first number on each line being the position within the normalized cycle (range 0-1), and all subsequent numbers being the waveform amplitudes for each specified waveform. These are raw values grouped by cycle, with a blank line between each cycle. So the file will have as many groups of lines as there are cycles in the selected analysis range for that run (as specified in the run's analysis parameter file).

Additionally, for each waveform in each run, the script produces a plot file named *runfile-wfa-wnn.plt*, which plots the averaged waveform amplitude (vs normalized cycle) with mean and standard deviation curves shown, and area under the curve calculated and displayed (based on the autoscaled baseline).

Options

`-c wfnum`

specifies the waveform number for the marked up cycles (default is 0).

`-w wfnum,...`

specifies the list of waveform numbers to export (default is all waveforms, as taken from the first runfile).

The *runfile* arguments specify one or more run file names to be measured (no default, runfile must be specified).

Output will be of the form:

time, voltage, voltage, ...

where time is a number between 0 and 1, for the position in a normalized cycle, and voltage values (in mV by default) are given for all selected waveforms. There will be multiple groups of these, separated by blank lines, for each cycle in a given run. In the case where multiple waveforms are included and they have different sampling rate divisors, only the samples that all line up at the same time value appear in the output, so the output will be at the base sampling rate divided by the least common multiple of all the divisors of the included waveforms.

A comma-separated text file of that form is generated for each runfile specified. Also, a plot of the averaged waveform amplitude is produced for each exported waveform in each runfile.

EXAMPLE

wfampls -c 7 -w 0,1,3,11 RIeng-30

Exports the four specified waveforms, using waveform 7 as the cycle waveform.

FILES

*.frm frame file containing run header

*.w?? waveform files

*-wfa.txt comma-separated values of relative time and voltages

*-wfa-wnn.plt HPGL plot file of averaged waveform amplitude

SEE ALSO

analysis(1), burstareas(1), dumprun(1), getwfdata(1)