

NAME

getsplat – extract and merge spike latencies from multiple traces

SYNOPSIS

getsplat prmfile1 prmfile2 ... > outputfile

DESCRIPTION

Getsplat gets spike latencies from two or more traces in a run. The *prmfile* arguments are the names of *analysis(1)* parameter files, in which all the necessary parameters have been set. The **.prm** suffix is added to the names, if not already present.

To use it, you must collect the data you want to analyse as triggered traces. The software will look for the first spike in each triggered sweep on the two (or more) traces you collect.

Next, you must set up an *analysis(1)* parameter file for each trace you wish to analyse. (Two parameter files are required for X-Y pairs of latencies, because the analysis program can currently handle only one trace at a time for trace spike analyses.) Set the parameters for the "Raw trace spike latencies vs step cycle" (*Analysis/Graphs/Interneuron/Latencies*), setting the "Spike trace #" to one of the traces you wish to analyse, and all the trace spike parameters appropriately. Since you are not really interested in step cycles, but instead want to get the latencies over the whole run, set the "Cycle W.F. #" to **-1**. Keep these parameters in one file, then set the "Spike trace #" and the trace spike parameters for the next trace, and keep these parameters in a different file.

Now, you can run "**getsplat** *prmfile1* *prmfile2* > *outputfile*", where *prmfile1* and *prmfile2* are the names of the two parameter files you kept. (Remember that the parameter file does not necessarily have the same name as the run file; the run file name is one of the parameters stored in the parameter file.) The *getsplat* program will run the *analysis* program twice, then merge the two sets of data from the graphs into one file of spike latency pairs. The output consists of an ASCII text file, containing two numbers per line. This format should be suitable for importing into spreadsheet programs or other graphing programs.

The latencies are matched up by the frame trigger times, but these times will not appear in the resulting data output. If any of the trigger times do not match (e.g. if one of the two traces does not have spikes on some of its triggered sweeps), then the program will give you a warning, but will still output the latencies for those that do match.

The program can also be used for three or more traces at once. Just set up a parameter file for each, and give all the parameter file names as arguments to *getsplat*. It will produce a file with one column of latencies for each trace.

FILES

*.prm	analysis parameter files
*.frm	frame files (for trace readings)
/tmp/gsl*	temporary files

SEE ALSO

analysis(1), *cap(1)*, *dsepr(1)*

DIAGNOSTICS

If *getsplat* runs without error, the only message given is "Analysing *prmfile*...", which appears before the analysis program is called for each specified file.

If any specified parameter file does not exist, or you don't have read-permission on it, you get the message "Can't open *name*."

The message "analysis failed!" appears if a fatal error occurred while the analysis program was running. It should be preceded by a message from the analysis program itself.

If the message "Can't create merge file" appears, it means there was a problem with the temporary files.

If the message "Warning – records lost in file merge." appears, it means the frame trigger times do not match for all the traces. This is usually because one of the traces does not have spikes on some of its triggered sweeps. The program will still output the latencies for those that do match.