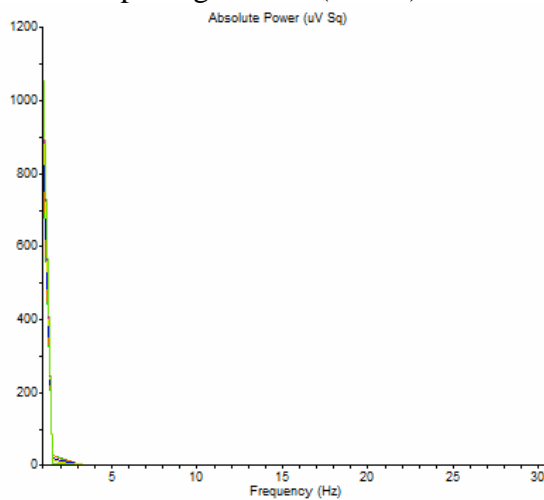


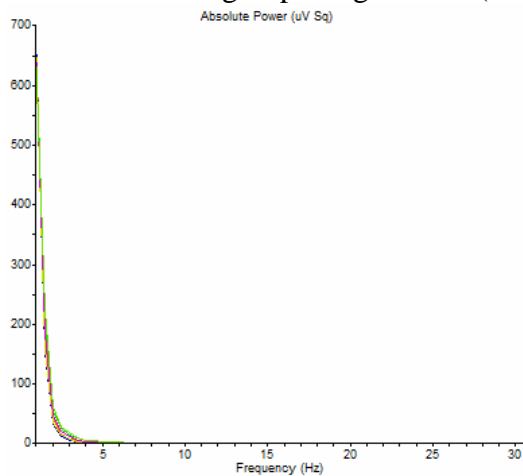
Test of the method of removing artifact segments from the EEG on power and phase differences in NeuroGuide.

Four different tests were conducted using a 1 Hz sine wave which is the frequency that is mathematically expected to be most effected by removing sections of the EEG. A = No splicing, B = Worst case scenario of splices that start and/or end at the peaks and troughs of the waves, C = Splices that start and/or end at 0 degrees and, D = Random splicing without trying to begin or end the segments at a particular phase.

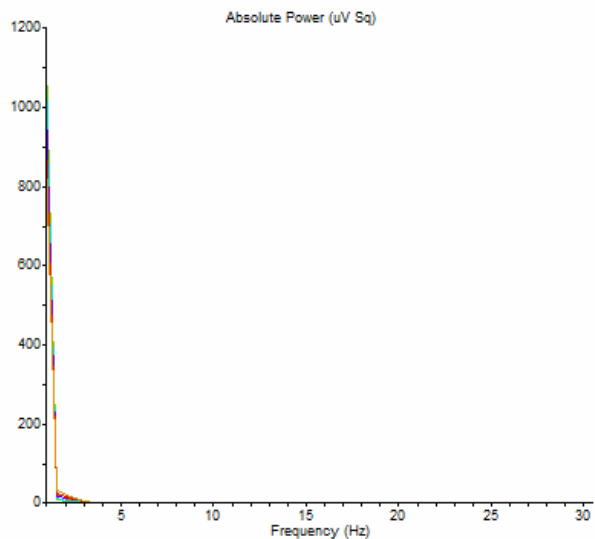
A – No Splicing at 1 Hz (60 sec)



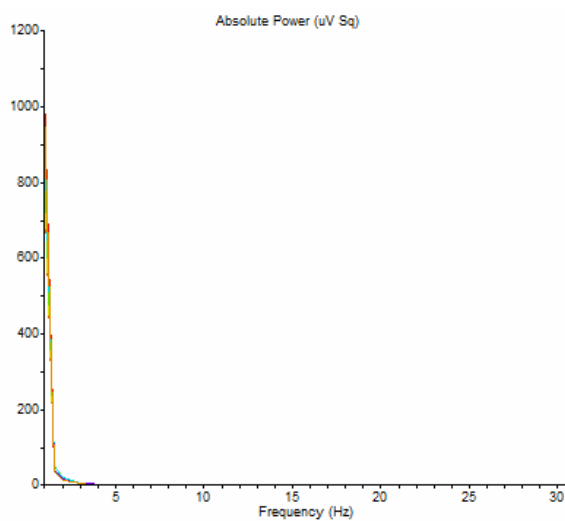
B – Peak to Trough Splicing at 1 Hz (50 sec) Peak-to-Trough



C – Splicing at 1 Hz (50 sec) at Zero Crossing



D – Splicing at 1 Hz (50 sec) Random Splicing



Phase differences were tested using 20 deg increments and a 1 Hz sine wave. Phase difference was computed for the delta frequency band and therefore noise is present at 2 to 4 Hz and this is why the phase differences are not exactly at 20 degree increments. This is expected. What is important is that the phase differences using the worst case scenario of peak-to-trough splicing did not distort or affect phase differences.

		No Splices 1.0 - 4.0 Hz	Splices (B) 1.0 - 4 Hz
FP1	F3	19.618828	19.618828
FP1	C3	40.669332	40.669332
FP1	P3	62.725669	62.725669
FP1	O1	84.719359	84.719359
FP1	F7	105.625292	105.625292
FP1	T3	125.100537	125.100537
FP1	T5	143.493895	143.493895