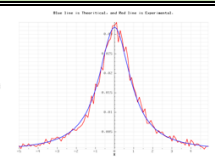
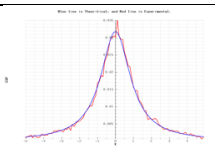
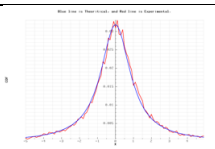
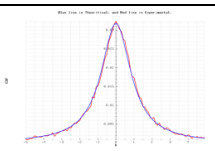
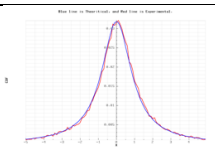
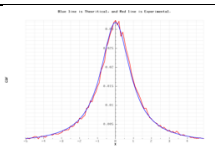
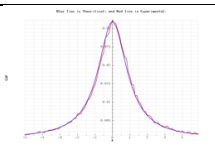
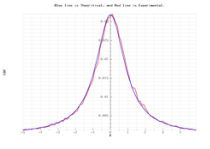
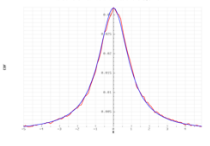
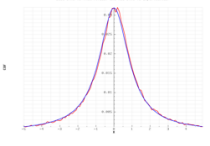
no_of_trails	Mean of empirical data	Graph
10000	0.008722	
20000	0.0087335	
30000	0.008762	
40000	0.008726	
50000	0.0087484	
60000	0.00875	
70000	0.00875229	
80000	0.00874788	
90000	0.00872711	
100000	0.0087295	

The mean of empirical distribution is floating and not converging to a specific number. The reason is because Cauchy Distribution do not own the expected value. As a result, the mean of empirical data will not converge as $n \rightarrow \infty$ with probability one.