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EECS 678 Lab 12 Report

1. A lack of change in system and user time in between sampling periods does not guarantee that a deadlock has occurred. This is the case because one thread could be waiting on another thread to finish or could be sleeping. A deadlock will only occur if no active threads make any progress. This means that there is no increase in both user time and system time.
2. A reliable assessment would need a sampling period of the longest amount of time a thread may be waiting or blocked. Therefore, the sampling period should be slightly longer than the longest time a thread may take to run.
3. I believe that the claim is true because as `ACTIVE_DURATION` increases, the philosophers have a longer thinking period. Once the thinking period ends, the philosophers will pick up the left chopstick. However, if both the thinking and eating periods are short, each philosopher may pick up the left chopsticks at the same time and cause a deadlock.