



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Sonia Samra	Project Number S1519
Project Title Opilliones: Harmonic Oscillators	
Objectives/Goals My objective was to learn how a spider's mass effects it's vibrations. I believe as the spider's mass increase the vibrations will decrease.	
Abstract	
Methods/Materials Six of the same type spiders with different mass. First spiders were massed. Then a photocell was attached to the computer and on the other side was a laser hitting the cell. The spider was placed inbetween. Every two times the beam was broken that was one vibration. Each spider was tested four times.	
Results The spider with the greatest mass had the least vibrations compared to the least mass spider.	
Conclusions/Discussion My conclusion is that heavier spiders vibrate at a slower rate, this is an example of harmonic motion. My hypothesis was supported by my data. The research on harmonic motion helped me develop a good hypothesis.	
Summary Statement My project is about figuring out how mass effects the harmonic motion of a spider.	
Help Received Fresno State University used scale under supervision of a university student: Sukhdeep Bassi	