

Abstract Submitted
for the OSS05 Meeting of
The American Physical Society

Raising Student Interest in Oscillating Systems by a Study of Car Suspensions KLAUS FRITSCH, John Carroll University — In mechanics students study oscillations in simple systems made up of a mass, a spring, and a damper. Student interest in this material can be raised considerably by a simple experimental and theoretical study of the suspensions in their cars. Most car suspension systems are very complicated. By simple measurements and by interpreting these through the use of physical and mathematical models, the students can learn much about the behavior of springs and oscillating systems as well as about the importance of using models in science. In particular, I will illustrate various approaches to obtaining a value for the bounce mode frequency of a Toyota Camry. The bounce mode represents purely up-and-down motions of the car body without pitching or rolling.

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Date submitted: 20 Oct 2006

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