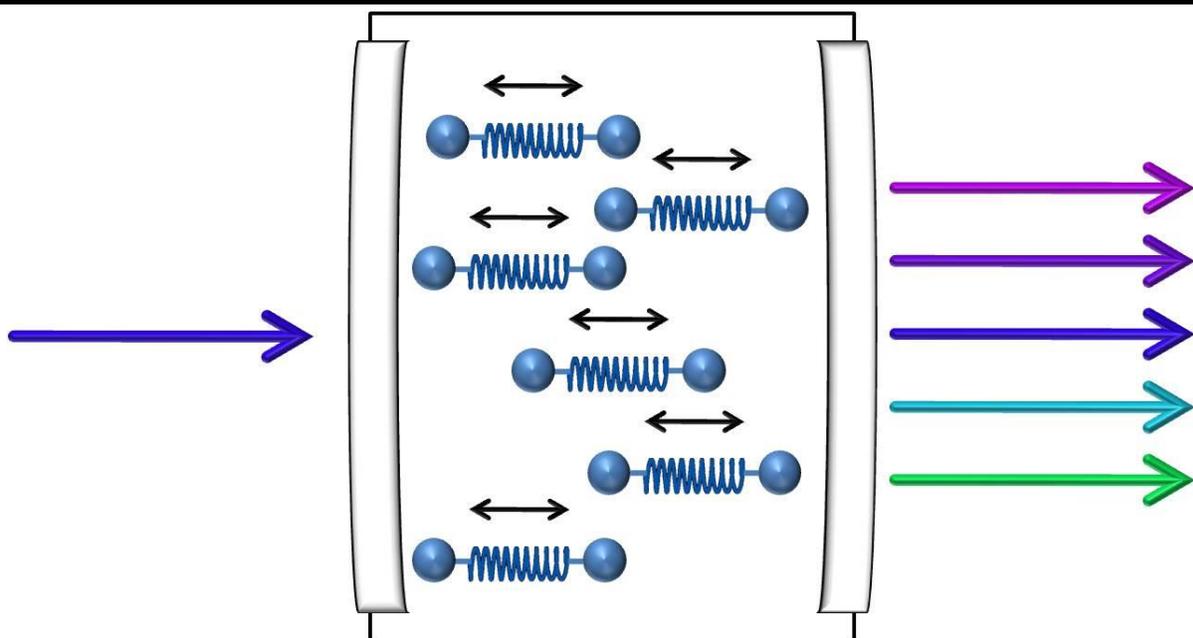


PHYSICS & ASTRONOMY COLLOQUIUM  
UNIVERSITY OF WISCONSIN – STEVENS POINT  
Thursday, February 13, 2014  
12:00 PM Room D279 SCI

Josh Weber

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**Molecular Modulation: Ultrafast Pulses,  
Molecular Control, & Precision Measurement**



**Abstract:** A single device that can simultaneously produce a multitude of different-colored lasers, sometimes called a "white light" laser, is a powerful tool. Not only can it be used to examine the properties of a wide variety of materials, but it can be used to measure and to control things that happen extremely quickly - in less than one quadrillionth (one billionth of a millionth) of a second! Molecular modulation exploits an unusual interaction between laser light and molecules to turn one laser into many lasers, an important step towards the creation of a white light laser source.

*Josh Weber is a PhD candidate in physics at UW-Madison, specializing in experimental atomic, molecular, and optical physics.*