SEMINAR IN PHYSICS

Friday, April 29, 2016
3:30-4:25 – Ross 0220

~ Refreshments! ~

Lasers and Nonlinear Optics

Cody Helms, UNC Physics Student

Although laser theory existed in the early 1900's, the actual technology to construct one did not become available until the 1960's. Once technology caught up, great strides were made in the development of lasers. Research has achieved many different improved laser types, specialized for different purposes, such as maximum peak pulse energy, maximum efficiency, and simply just output power. Many of the higher powered lasers emit wavelengths that are in the infrared range, but with the aid of nonlinear optics, those wavelengths can be brought down to the visible spectrum. This helps with safety and other various forms of research.

Black Holes and Hawking Radiation

Elias Alvarado, UNC Physics Student

I will be talking about the phenomenon known as Hawking Radiation and what it can tell us about the universe. I will be discussing past as well as ongoing research, how those experiments were or are being conducted, and what potential future research it may lead to. One point I specifically hope to address is what Hawking Radiation can tell us about the lifetime of a black hole based on what we know already, and how information lost inside a black hole's event horizon is dispersed back into the observable universe.