1032-78-121 **Alejandro Aceves*** (aceves@math.unm.edu), Humanities Building 4th Floor, MSC03 2150, Albuquerque, NM 87131, and **Alexey Sukhinin** and **Jean-Claude Diels**. *Modeling ultraviolet light propagation in air.*

The interaction of intense light pulses and matter can lead to critical collapse dynamics due to nonlinear self-focusing effects. When the medium is air, it can ionize leading to plasma formation. This in turn defocuses light. In this work we demonstrate that a delicate balance of these two effects occurs leading to steady pulse formation. Our theoretical and numerical results corroborate resent experimental work. (Received August 17, 2007)