Columbia University Department of Physics

High Energy Particle Seminar Series

"Results on Jet Quenching from ATLAS"

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Jets produced in relativistic heavy ion collisions may lose energy or suffer modification of their parton showers through the phenomena of jet quenching. Thus jets provide an important tool to study the properties of the medium of deconfined, strongly-interacting quarks and gluons produced in these collisions. Conversely, medium-induced modifications to the nominal vacuum parton shower constitute a new domain in the study of jet phenomenology. In general, these jets provide a unique opportunity to study the universal physical phenomena of radiation and diffusion in a fundamental theory. Indirect measurements related to jet quenching have been performed at RHIC, however measurements of fully reconstructed jets in heavy ion collisions have only become tractable in the LHC era. In this talk, I will summarize the first series of jet measurements from the ATLAS experiment and discuss the implications of these results on our current understanding of the quenching mechanism.

Wednesday, April 10, 2013 : 1:00 PM, 705 Pupin Hall