PHYSICS COLLOQUIUM

ABHIJIT MAJUMDER

Professor of Physics, Wayne State University

Resolving the Quark Gluon Plasma with Higher Precision

Over the last decade in relativistic heavy-ion collisions, the modification of hard QCD jets due to their passage through the Quark Gluon Plasma (QGP) has turned from a discovery to a precision tool to study the internal structure of the QGP. We will focus on a variety of issues related to the use of this tool as a probe of the plasma. This will be followed by a brief discussion of some of the differing approaches to this problem and new insights being extracted from current measurements. With the ever growing amount and variety of data, and the increasing sophistication of theoretical techniques, the study of jet modification is morphing into a multi-disciplinary enterprise involving computer scientists and statisticians working in collaboration with heavy-ion theorists and experimentalists. We will conclude with a preview of these exciting upcoming developments and their potential to resolve the structure and dynamics of the QGP.

Dr. Majumder *obtained his Ph.D. in theoretical nuclear physics form McGill University, after completing undergraduate and Masters degrees at the Indian Institute of Technology at Kharagpur, India. He completed postdoctoral fellowships at Lawrence Berkeley National Laboratory and Duke University. He was visiting assistant professor at The Ohio State University and is currently associate professor of physics at Wayne State University. He is the spokesperson of the JETSCAPE collaboration, a nine institution multi-disciplinary collaboration between nuclear theorists, experimentalists, computer scientists and statisticians, tasked with the construction of the next generation of event generators to simulate heavy-ion collisions.*

Thursday, April 27, 2017 at 4:00PM in LL. 316

Refreshments at 3:45PM