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## CSU PHYSICS COLLOQUIUM

### The most perfect fluid: Quark Gluon Plasma

**Speaker: Jamie Nagle**

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**Colorado State University**

**4:00PM, Monday; September 21, 2015**

**Refreshments at 3:45PM**

**Location: 120 Engineering (Hammond Auditorium)**

#### Abstract

Quarks and gluons are the basic building blocks for protons and neutrons, and yet we never observe them in isolation due to QCD confinement. However, it was theorized that at high enough temperatures (trillions of degrees Kelvin) one could deconfine these building blocks into a Quark Gluon Plasma. In highly relativistic collisions between nuclei, the Relativistic Heavy Ion Collider (RHIC) and the Large Hadron Collider (LHC) are able to create tiny droplets of Quark Gluon Plasma in the laboratory. In this talk we describe the amazing properties of this plasma, in particular its most perfect fluid nature.

#### Biographical Sketch

Jamie Nagle received his B.Sc. from the Massachusetts Institute of Technology in 1991 and his Ph.D. in Physics from Yale University in 1997. He held a one-year Postdoctoral position at Columbia University before being promoted in 1999 to an Assistant Professor. He came to the University of Colorado at Boulder in 2002 where he is currently a Professor of Physics. He is Co-Spokesperson for the PHENIX Collaboration and is supported by funding from the Department of Energy, Office of Science.