

Fall 2024 Physics Colloquium



Friday, October 4, 2024

3:00 PM

PAS 201 or Zoom

<https://arizona.zoom.us/j/81283840289>

Berndt Mueller

Duke University

The search for the quark-gluon plasma - How successful was it?

Abstract: With the advent of multi-billion dollar research facilities in nuclear and particle physics the need arises for a compelling programmatic justification and research strategy. A critical analysis of the success of this strategy upon completion of the program can hold valuable lessons for future research projects of comparable scale. In my colloquium I will attempt such a comprehensive analysis of the research program of the Relativistic Heavy Ion Collider (RHIC), the first billion-dollar scale facility primarily dedicated to nuclear research. I will review where the proposed research program succeeded and where it fell short and highlight the expected and unsuspected accomplishments of the program. In the final part of my lecture I will discuss the planned program for the next large nuclear physics facility, the Electron-Ion Collider, which is expected to start operations a decade from now.

Bio: PhD 1973 at the Goethe University Frankfurt, professor at Duke University since 1990 (since 1996 as "JB Duke Professor of Physics"). From 1997 to 1999 he was chairman of the Department of Physics and from 1999 to 2004 Dean of the Natural Sciences at Duke, and 2013-2020 Brookhaven Lab's Associate Laboratory Director for Nuclear and Particle Physics. Recipient of 2021 Herman Feshbach Prize in Theoretical Nuclear Physics.

** Refreshments served in PAS 218 at 2:30 PM – 3:00 PM **

