MITP
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S E M I N A R

Squeezing and melting nuclear matter with coloured glass

Speaker:

Dr Mawande Lushozi

University of Cape Town

Date:
Tuesday, 26 March 2024

Time:
13h15-14h15 SAST

***Venue*:**
- P213, Physics Building, East Campus, WITS
- Online

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ABSTRACT:
I will discuss how ultrarelativistic heavy ion collisions provide a terrestrial environment to study hot nuclear matter at high baryon density. At ultrarelativistic energies, a nucleus is best described as a dense medium, saturated with gluons, known as the Colour Glass Condensate, rather than as protons and neutrons or a collection of incoherently scattering partons. Looking away from the central rapidity region and focusing instead on the fragmentation region we can show that the Color Glass Condensate compresses a target nucleus to densities that are an order of magnitude higher than regular nuclear matter, possibly forming a baryon-rich quark gluon plasma.

WHO SHOULD ATTEND?
This is a colloquium talk intended to be accessible to honours and other postgraduate students. Familiarity with quantum field theory and group theory is NOT assumed.

All are welcome!

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