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Mess Spectra and Decay of Mesons under Strong External Magnetic Field (student presentation)

Summary

Over the years, studies on the nature and state of strong acting substances under extreme conditions has attracted much attention, where extreme conditions include high temperatures and finite baryon chemical potentials, as well as strong magnetic fields. The strong magnetic field generated in heavy ion collisions may affect the properties of the early "charged quarks" in the collision and finally affect the properties of the hadrons formed by these "magnetized" quarks.

In this presentation, we will show mass spectra and meson decay under strong external magnetic field. Our result shows that as quarks of neutral mesons are magnetized at magnetic field, sigma' s mass grows and pion' s mass slowly drops, and coupling constant is significantly strengthened compared with which without magnetic field.

Primary author: Ms YANG, Shuyun (Centra China Normal University)

Presenter: Ms YANG, Shuyun (Centra China Normal University)