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Ferromagnetism in nuclear matter

Wednesday, 13 July 2011 11:45 (15 minutes)

<p>Understanding the magnetic effects of ultra-dense, cold nuclear matter is of particular importance when investigating the magnetic properties of dense matter systems such as neutron stars. One property that we are interested in is the possibility of generating a magnetic field in nuclear matter as the central density increases. We investigate this possibility by employing a relativistic, self-consistent calculation to capture the interaction of the neutrons, protons and electrons with the magnetic field. In this talk we present this model for describing ferromagnetism in dense nuclear matter systems. Our current results will also be presented.

Level (Hons, MSc,
   PhD, other)?

PhD

Consider for a student
   award (Yes / No)?

Yes

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

Yes

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Session Classification: Theoretical

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