Color Superconductivity and QCD at high density
OMER RAHMAN, Department of Physics and Astronomy, Stony Brook University — Color Superconductivity is a phenomena predicted in very dense and low temperature baryonic matter. If the density of baryonic matter is increased to a certain extent, the constituent quarks are deconfined and form a quark matter. This quark matter is expected to show “color superconductivity” by forming quark Cooper pairs. The only place in nature where quark matter might exist is inside the central regions of Compact stars. In this talk, by introducing QCD and BCS theory of superconductivity, the basic features of high density QCD and color superconductivity will be discussed. Also the impact of color superconductivity on the observational properties of a compact star will be mentioned. References:


2. Igor A. Shovkovy “Two lectures on color superconductivity” http://arxiv.org/abs/nucl-th/0410091v2