

684th ASRC Seminar

Date: 13:30 - Monday, May 22

Location: Conference room #5 Laboratory
building No. 1

Speaker: Prof. Masayasu Harada
(Nagoya University)

Title: Delta Matter in a Parity Doublet Model

Abstract: We calculate the mass modification of $\Delta(1232)$ as well as $N(939)$ in symmetric and asymmetric nuclear matter based on the parity partner structure, where they have a certain amount of the chiral invariant mass. We study phase structure of our model in cold dense matter and find that the onset density of Δ matter is around two or three times the normal nuclear matter density.

We also calculate the effective masses, pressure and symmetry energy to study how the transition to Δ matter affects such physical quantities. We observe that the physical quantities change drastically at the transition density.

<Contact>

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