Contribution ID: **38** Type: **not specified**

Formation of possible eta'(958)-nucleus bound states and eta'N interaction

Friday, 29 July 2016 09:55 (40 minutes)

In this talk, we shed light upon the mass of the eta' in nuclear matter in the context of partial restoration of chiral symmetry, pointing out that the U_A(1) anomaly effects causes the mass difference of eta'-eta necessarily through the chiral symmetry breaking. As a consequence, the mass of the eta' is expected to be reduced by order of 100 MeV in nuclear matter. We propose several reactions for the formation of the eta'-meson bound states and discuss the experimental feasibilities.

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Session Classification: Plenary