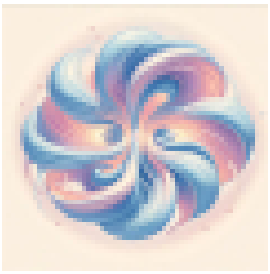

ID de Contribution: **61** Type: **Talk**

Chiral Symmetry Breaking and Spin-One Condensates in Rotating Quark-Meson Systems (online)

mercredi 24 juillet 2024 17:30 (30 minutes)

We explore chiral symmetry breaking in a rotating system within a quark-meson model of interacting massless quarks, incorporating tensor channels. Our findings reveal that new interaction channels emerge due to the explicit breaking of rotational symmetry due to non-zero rotation. We demonstrate that chiral symmetry breaking leads to the generation of two independent condensates: the conventional chiral condensate and a spin-one condensate. The chiral condensate results in a dynamical fermion mass, while the spin-one condensate is associated with the spin chemical potential. The quark-antiquark pairs with opposite spins possess a resultant spin moment, which can align with the net angular momentum, giving rise to a net spin moment for the ground state.

Auteurs principaux: DASH, Ashutosh (Goethe Univeristy, Frankfurt); M. KIEFER, Lutz (Goethe University, Frankfurt)

Orateur: DASH, Ashutosh (Goethe Univeristy, Frankfurt)

Classification de Session: Polarization