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Partial restoration of chiral symmetry inside hadrons

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The presence of color source may modify the chiral condensate that characterizes the spontaneous breaking of chiral symmetry in the QCD vacuum. Using the overlap-Dirac eigenmodes, we investigate this phenomenon around static color sources representing quark-antiquark and three-quark systems. We show that the chiral condensate is reduced inside the flux-tube that is formed between the color sources. Using the three-quark system in a finite box, we estimate the magnitude of partial chiral restoration at finite density.

Primary author: Dr IRITANI, Takumi (High Energy Accelerator Research Organization (KEK))

Co-authors: Dr COSSU, Guido (High Energy Accelerator Research Organization (KEK)); Prof. HASHIMOTO, Shoji (High Energy Accelerator Research Organization (KEK))

Presenter: Dr IRITANI, Takumi (High Energy Accelerator Research Organization (KEK))

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