10th International Conference on New Frontiers in Physics (ICNFP 2021)



Contribution ID: 215 Type: Talk

Chiral Spirals in QCD or Quantum Spin Liquid?

Tuesday, 31 August 2021 11:00 (30 minutes)

We discuss dense cool QCD where a region with spatially inhomogeneous condensate might emerge. In that case, QCD phase diagram may exhibit a Lifshitz regime, which can appear either instead of, or in addition to Critical End Point. We study the Lifshitz regime using a combination of large-N expansion and numerical lattice simulations of an effective O(N) sigma model. We find evidence that quantum fluctuations disorder inhomogeneous condensate ("chiral spirals") and give rise to unusual quantum spin-liquid phase. We also discuss how this novel phase can be detected experimentally.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

Semeon Valgushev

Internet talk

Yes

Primary authors: TSVELIK, Alexei (BNL); PISARSKI, Robert (Brookhaven National Lab.); VALGUSHEV, Semeon (Brookhaven National Laboratory); RENNECKE, Fabian; SKOKOV, Vladimir (Brookhaven national laboratory)

Presenter: VALGUSHEV, Semeon (Brookhaven National Laboratory)

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