

KMI Colloquium

Searching for lost symmetry

- vector meson modification in nuclear medium -



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Abstract:

Why are we heavy? Did we eat too much? It can be a good reason, but not only so.

As Nambu found out, we are heavy since the Higgs mechanism worked first and then the spontaneous symmetry breaking in the strong force generated the other 99% of mass in the Universe. We do know, with experimental evidence, the former is correct, but not so clear for the latter.

One might say everything is already understood with the QCD Lagrangian using lattice QCD calculations. But in reality, very limited observables can be obtained only after years of lattice calculations. Indeed lattice QCD has very limited prediction power. So what shall we do ?

This talk covers experimental efforts to shed the light on this situation. We believe that we have seen signatures which signal "partially-restored" such broken symmetry.

