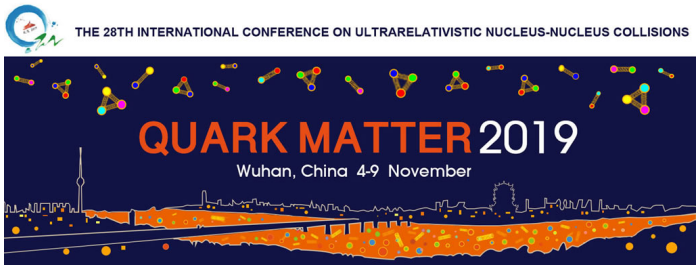

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Quarkyonic Matter and Neutron Stars

Wednesday, 6 November 2019 16:40 (20 minutes)

Masses and radii of neutron stars and the recent data from LIGO suggest that
the sound velocity is greater than or of the order of 1/3 at densities a few times that of nuclear matter. We show that this arises naturally if nuclear matter is Quarkyonic. Quarkyonic matter has a shell in the Fermi surface of nuclear matter
and Fermi sea of quarks. We discuss how this shell might arise dynamically

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