Contribution ID: **375** Type: **Poster**

Study of $\Lambda - \Lambda$ correlations and search for the H-dibaryon with the STAR detector at RHIC

Considerable experimental efforts have been devoted to search for the existence of H-dibaryon, a six quark state, proposed by Jaffe[1]. It has also been proposed that the H particle would appear as a bump in the $\Lambda-\Lambda$ invariant mass spectra if the H is a resonance state, or the H would lead to a depletion of the Lambda-\Lambda$correlationnearthethresholdiftheHisweaklybound.Inthisscenario,themassofHisexpected$ $dibaryon.The$\Lambda-\Lambda$correlationmeasurementsatRHICaresensitivetotheirmutualinteractions,whichcanbeusedt$ \Lambda$scatteringparametersinnucleus-nucleuscollisions.Wewillpresentthemeasurementof$\Lambda-\Lambda$correlationsinAu + Aucollisionsat$\sqrt{s}=39GeVand$\sqrt{s}=200$GeV using the STAR experiment at RHIC.

[1] R. L. Jaffe, Phys. Rev. Lett. 38, 195 (1977).

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Track Classification: Correlations and fluctuations