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Title:	Estimation of temperature fluctuations in heavy ion collision using wavelet analysis
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Abstract:	Heavy-ion collision experiments at the Large Hadron Collider (LHC) and Relativistic Heavy Ion Collider (RHIC) created a deconfined state of quarks and gluons called Quark-Gluon Plasma (QGP). Fluctuation in initial energy density in the system may lead to local tem- perature fluctuation. Hence, a good understanding of such thermodynamical quantities is essential as they give us a vital insight into the QGP. We are developing techniques based on wavelet analysis and machine learning to tap into such fluctuations. We divide the en- tire phase space into equally spaced bins and calculate each bin's temperature using Tsallis statistical framework. We then apply the wavelet analysis technique on phase space bins to detect the temperature distribution anomaly.
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