SCIENCEDOMAIN *international*
www.sciencedomain.org

SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	**2014_PSIJ_10296**
Title of the Manuscript:	**The equation of state for non-ideal quark gluon plasma**
Type of the Article	**Original Research Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline)

SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments	The present manuscript discusses a long standing problem in heavy ion physics community ie., equation of state (EOS) for quark gluon plasma (QGP) phase. Authors compare two different EoS obtained from Mayer's cluster expansion theory and a general thermodynamic model for SQGP in the view of thermodynamical properties of QGP. The authors also compare the model results to the lattice data to validate the EoS. Thus, this manuscript definitely warrants publication. However, before publication authors must address certain issues:	
Minor REVISION comments	(1) There are certain other models, eg., various versions of "quasiparticle models" which are very successful in defining the thermodynamic and transport properties of QGP. For example, see the following references : (a) P. K. Srivastava and C. P. Singh, Phys. Rev. D 85, 114016 (2012) (b) P. K. Srivastava, S. K. Tiwari and C. P. Singh, Phys. Rev. D 82, 014023 (2010). (c) V. M. Bannur, Phys. Lett. B 247, 671 (2007) The authors must compare their results with the results obtained in these references or at least cite them and discuss about these models in the introduction for the sake of completeness.	

SDI Review Form 1.6

	(2) The authors have used the lattice data which are somewhat obsolete. As lattice calculations are improving day-by day thus I suggest the authors to use the recent lattice data of thermodynamical quantities in comparison. For recent lattice data please see the following refs. (a) S. Borsanyi et. al., J. High Eergy Physics 01, 138 (2012); J. High Energy Physics 11, 077 (2010). (b) M. Cheng et al., Phys. Rev. D81, 054504 (2010) After proper inclusion of above suggestions, manuscript can be published.	
Optional/General comments	English is poor throughout the manuscript. Some sentences should be reframed so that readers can understand it.	

Note: Anonymous Reviewer