



第96回2024年度第12回

広島大学極限宇宙研究拠点

Hiroshima University CORE-U Seminar

Speaker: Dr. Noriyuki Sogabe

曾我部 紀之 氏 (University of Illinois Chicago)

**Title: Non-monotonic specific entropy
on the transition line near the QCD critical point**

Date : 25th.Oct.2024 (Fri.) (9:00am-10:30am JST)

2024年10月25日(金) (9:00-10:30)

Place: ONLINE ZOOM

Abstract: See the back side of this poster

Language: Oral talk in Japanese/ Slides written in English

ZOOM Link (limited within 100)

<https://us04web.zoom.us/j/78510680276?pwd=HtaV7bUpUXirAZlQrX3OVgLXMXjgMn.1>

ミーティング ID: 785 1068 0276

パスコード: U08YAM

共同セミナーの出欠はセミナー終了時にZOOMのチャット機能を使ってとります。
講演終了後に氏名、学生番号をホスト(両角)あて送ってください。11月1日(金)
4:00pmまでに両角(経A306)までサインをもらいに来てください。

The participation of collaboration seminar will be verified after the talk using the ZOOM chat. Please send your name and student number to the host(T.Morozumi). In addition, by Nov.1st 4:00pm, please come to T.Morozumi (Economy, A306) to get the signature

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(_at_は@に変更ください: change _at_ to @)

広島大学極限宇宙研究拠点 (Core-U) セミナー 世話人

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Organizers : Yorito Yamaguchi, Tsunefumi Mizuno, Takuya Morozumi

Abstract:

Abstract: We study the effect of the QCD critical point on the isentropic trajectories in the QCD phase diagram. We point out that the universality of the critical equation of state (EOS) and the third law of thermodynamics dictates a non-monotonic behavior of specific entropy (per baryon) on at least one side of the coexistence line. We examine how the maximum depends on the critical EOS parameters commonly used in literature. Based on these findings, we classify how the isentropic trajectories in adiabatically expanding heavy-ion collision fireballs approach the QCD critical point or the coexistence line.