



第107回2025年度第6回

広島大学極限宇宙研究拠点セミナー

Hiroshima University CORE-U Seminar

Speaker: Dr. Apriadi Salim Adam

(Research Center for Quantum Physics , BRIN, Indonesia)

Title: Vacuum structure of an extended standard model
with $U(1)$ symmetry

Date : 22. Sep.2025 (Mon.) (14:00-15:30)

2025年9月22日(月) (14:00-15:30)

Place: 広島大学理学部E210教室 (ハイブリッド)

Room E210, Faculty of Science, Hiroshima University

Abstract: See the back side of this poster

Teams Link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_MzRIZmY3ZjEtNGU5OS00Yjg4LTlmNWItNDhhY2FINTBiZTVh%40thread.v2/0?context=%7b%22Tid%22%3a%22c40454dd-b263-4926-868d-8e12640d3750%22%2c%22Oid%22%3a%22aa71a5fa-0721-425b-ac09-88a3796a4826%22%7d

共同セミナーとしての認定は対面のみとします。出欠はセミナー終了時にE210で確認します。

The participation of collaboration seminar will be verified only for in-person after the talk at the room E210. Please bring the seat of the paper for the signature.

世話人連絡先 広島大学素粒子ハドロン理論研究室 両角卓也

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広島大学極限宇宙研究拠点 (Core-U) セミナー 世話人

山口頼人、水野恒史、両角卓也

Organizers : Yorito Yamaguchi, Tsunefumi Mizuno ,Takuya Morozumi

Abstract

In this work, we study the vacuum structure of an extended standard model with $U(1)_D$ symmetry. The potential of the proposed model contains two $SU(2)$ scalar doublets and two scalars singlet. We theoretically analyze constraints, such as bounded-from-below, global minimum, and perturbativity up to the Planck scale. The experimental bounds from the Higgs invisible decay are also investigated.

This work is based on the paper that appears in
arXiv:2509.05534 [hep-ph]