Contribution ID: **27** Type: **not specified**

Constraints from hypernuclei on a deeply bound H dibaryon (invited talk)

Thursday, April 3, 2025 11:00 AM (30 minutes)

"Treating the NAGARA emulsion event in a realistic L-L-4He three-body model, it is found that the LL6He -> H + 4He strong-interaction lifetime becomes much longer than hypernuclear weak-interaction decays for H dibaryon mass below m(L)+m(n), so that a deeply bound H is not in conflict with hypernuclear data.

Using EFT methods, it is found that the H -> nn weak-decay lifetime for m(H) < m(L) + m(n) is less than 1 year, much too short to qualify H for a dark-matter candidate.

Ref. – A. Gal, PLB 857 (2024) 138973, arXiv:2404.12801"

Presenter: GAL, Avraham (Racah Inst. Phys., Hebrew University, Jerusalem)

Session Classification: Plenary Session