

11th International Workshop on Charm Physics (CHARM 2023)



Contribution ID: 34

Type: **invited plenary talk**

Status of Intrinsic Charm

Wednesday 19 July 2023 11:00 (45 minutes)

A nonperturbative charm production contribution, known as intrinsic charm, has been speculated since the 1980s. While it has yet to be satisfactorily proven, there have been recent tantalizing hints. Several experiments, either taking data or planned, could provide definitive evidence in the next few years. Recent experiments that have taken J/ψ and D meson data include SeaQuest at Fermilab and SMOG at LHCb. Future experiments such as NA60+ are in an energy regime where the intrinsic charm quark signature could be large and unmistakable.

In this talk, the status of intrinsic charm is reviewed and model comparisons are made to available data, see also Refs. [1-3].

[1] R. Vogt, Limits on Intrinsic Charm Production from the SeaQuest Experiment, *Phys. Rev. C* **103** (2021), 035204.

[2] R. Vogt, Contribution from Intrinsic Charm Production to Fixed-Target Interactions at the LHC, submitted to *Phys. Rev. C*.

[3] R. Vogt, Energy dependence of intrinsic charm production: Determining the best energy for observation, *Phys. Rev. C* **106** (2022) 025201.

[†]This work was performed under the auspices of the U.S. DoE by LLNL under Contract DE-AC52-07NA27344 and supported by LDRD projects 21-LW-034 and 23-LW-036.

Consent

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Session Classification: Plenary