



Contribution ID: 215

Type: **Oral Presentation**

## Nucleon-nucleon scattering from distillation

*Thursday, August 11, 2022 12:10 PM (20 minutes)*

In published work, we reported a study of the H dibaryon in the continuum limit of SU(3)-flavor-symmetric lattice QCD with a pion/kaon/eta mass of roughly 420 MeV, employing finite-volume quantization conditions and distillation. The data were affected by large discretization effects, leading to a small binding energy in the continuum. In this talk, I will present results for nucleon-nucleon scattering based on the same dataset. In the S wave, we find that nucleon-nucleon systems with both isospin zero and one are unbound. We also obtain a nonzero signal for some higher partial waves as well as the mixing between spin-1 coupled S and D waves.

**Primary author:** Dr GREEN, Jeremy (Trinity College Dublin)

**Co-authors:** HANLON, Andrew (BNL); JUNNARKAR, Parikshit; WITTIG, Hartmut

**Presenter:** Dr GREEN, Jeremy (Trinity College Dublin)

**Session Classification:** Nuclear Physics

**Track Classification:** Nuclear Physics