Contribution ID: **28** Type: **Contributed Talk**

S matrices of elastic α-^{12}C scattering at low energies in cluster effective field theory

Monday, 31 July 2023 17:55 (15 minutes)

The elastic α-^{12}C scattering at low energies for $l = 0, 1, 2, 3, 4, 5, 6$ is studied in effective field theory. We discuss the construction of the S matrices of elastic α-^{12}C scattering in terms of the amplitudes of sub-threshold bound and resonant states of ^{16}O, which are calculated from the effective Lagrangian. The parameters appearing in the S matrices are fitted to the phase shift data below the p-^{15}N breakup threshold energy, and we find that the phase shifts are well described within the theory.

Primary author: Prof. ANDO, Shung-Ichi (Sunmoon University)

Presenter: Prof. ANDO, Shung-Ichi (Sunmoon University)

Session Classification: Monday Parallel Session: Few-Nucleon Systems (AudiMax)