

ECT* SEMINAR Search for Exotic Hadrons in $\eta(\prime)\pi$ at GlueX

Wednesday, June 14, 2023 at 11:00
Malte ALBRECHT | Jefferson lab, USA

The theoretical description of the strong interaction between quarks and gluons that form hadrons is provided by Quantum Chromodynamics. However, the impact of gluonic excitations on the characteristics of hadrons and their role in hadronic structure is yet to be determined. Recent discoveries of several possibly exotic hadrons highlight the significance of precise spectroscopic measurements in comprehending the nature of the strong interaction. This presentation focuses on the status of the hunt for exotic contributions in photoproduction data obtained with the GlueX experiment at Jefferson Lab in $\eta(\prime)\pi$ systems. Specifically, I will discuss the investigation of the $a_2(1320)$ meson production in these key channels, which is an initial step towards identifying exotic quantum-number hybrid mesons. Furthermore, the discussion will cover the application of an amplitude analysis that exploits the polarization of the photon beam available to the GlueX experiment and its implications for identifying the lightest hybrid meson.

To reach Villa Tambosi:

Take bus number 13 from Povo or bus number 6 from the city center. The bus stop is in front of the Villa.

Contacts: agnech@ectstar.eu

Director of the ECT*: Professor Gert Aarts

The ECT* is part of the Fondazione Bruno Kessler. The Centre is funded by the Autonomous Province of Trento, funding agencies of EU Member and Associated states, and by INFN-TIFPA and has the support of the Department of Physics of the University of Trento.