Service de Physique Nucléaire

Séminaire

le vendredi 28 mai 2010 à 11h

CEA Saclay, Orme des Merisiers, Bât. 703, Salle 135

Search for exotic mesons using Partial Wave Analysis methods at VES, E852, and COMPASS.

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Exotic mesons are mesons composed from something else than the standard quark-antiquark configuration of the naïve quark model. Glueballs, hybrid mesons, and multi-quark states are predicted only by calculations guided by Quantum Chromo-Dynamics. A large experimental effort for isolating such mesons has been undertaken in many laboratories around the world. The experimental results strongly rely on the interpretation of the data through Partial Wave Analysis (PWA). In this seminar, the development of PWA methods for pion beam diffractive dissociation, hadron central production reactions, and lepton-beam exclusive reactions will be discussed. Brief review of the results obtained by VES (Protvino, Russia) and E852 (Brookhaven, USA) experiments will be given, including search for the spin-exotic $J^{PC} = 1^{-+}$ state. The current situation with recent PWA analysis of the COMPASS (CERN) data will be reported.

Le café sera servi 10 minutes avant

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