Theoretical aspects of pentaquark searches

A.P. Szczepaniak

Physics Department and Nuclear Theory Center, Indiana University, Bloomington IN, 47405, USA E-mail: aszczepa@indiana.edu

Abstract. The experimental evidence for the Θ^+ pentaquark was examined. We reviewed old duality arguments against pentaquarks based on the observed exchange degeneracy of Regge trajectories, and reminded about past null searches and kinematical effects. We shoed how various kinematical effects could also be responsible for the present sightings of peaks in the K^+n and K_Sp spectra. The work presented was based on papers written in collaboration with A. Dzierba and C. Meyer [1, 2]

Keywords: pentaquarks, resonances **PACS:** 11.80.Cr, 13.60.Le, 13.60Rj

REFERENCES

- 1. A. R. Dzierba et al. Phys. Rev. **D** 69, 051901(R) (2004).
- 2. A. R. Dzierba, C. A. Meyer and A. P. Szczepaniak, "Reviewing the evidence for pentaquarks," arXiv:hep-ex/0412077.