

Abstract Submitted
for the TS4CF08 Meeting of
The American Physical Society

Pion-Nucleon Scattering and Analysis from threshold to the N*(1440) Resonance Region¹ MICHAEL SADLER, SHON WATSON, Abilene Christian University, JUGOSLAV STAHOV, University of Tuzla — Many measurements for pion-nucleon scattering from threshold to the N*(1440) resonance region have been made since 1980, when the landmark Karlsruhe-Helsinki (KH) and Carnegie Mellon-Berkeley (CMB) partial wave analyses (PWA) were completed. These measurements consist of differential cross sections and analyzing powers for elastic scattering and charge exchange. Spin rotation parameters for elastic scattering in the momentum interval 0.4 – 0.7 GeV/c have also been obtained. The program culminated with measurements of π -p \rightarrow Neutrals (charge exchange, multiple pi-zero final states, eta production, and inverse photoproduction) using the Crystal Ball at BNL. Resonance parameters for the N*(1440) in the Review of Particle Physics by the Particle Data Group have been obtained from the KH and CMB analyses. The 2006 edition also includes the analysis by George Washington University (GWU) “for averages, fits, limits, etc.”, but the parameters were unchanged. An overview of the data will be presented along with comparisons to PWA.

¹Supported by USDOE grant DE-FG03-94ER40860.

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Date submitted: 22 Sep 2008

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