

Abstract Submitted  
for the DNP20 Meeting of  
The American Physical Society

**Nucleon resonance spectrum from Regge systematic<sup>1</sup>** CSAR FERNNDEZ RAMREZ, JORGE ANTONIO SILVA-CASTRO, Instituto de Ciencias Nucleares, Universidad Nacional Autnoma de Mxico, MIGUEL ALBALADEJO, Jefferson Lab, IGOR DANILKIN, Institut fur Kernphysik PRISMA Cluster of Excellence, Johannes Gutenberg Universitat, ANDREW JACKURA, Jefferson Lab Old Dominion University, VINCENT MATHIEU, Universidad Complutense de Madrid, JANNE NYS, Department of Physics and Astronomy, Ghent University, ALESSANDRO PILLONI, ECT\* FBK, Trento, ADAM SZCZEPANIAK, Jefferson Lab Indiana University, GEOFFREY FOX, Indiana University, JPAC COLLABORATION — We use Regge phenomenology to study the structure of the poles of the  $N^*$  and Delta\* spectrum. We employ the available pole extractions from partial wave analysis of meson scattering and photo- production data. We assess the importance of the imaginary part of the poles (widths) to obtain a consistent determination of the parameters of the Regge trajectory. We compare the several pole extractions and show how Regge phenomenology can be used to gain insight into the internal structure of baryons. We find that the majority of the states in the parent Regge trajectories are compatible with a mostly compact three- quark state picture.

<sup>1</sup>PAPIIT-DGAPA-UNAM (Mexico) Grant No. IA101819, CONACYT (Mexico) Grants No. 619970 and No. A1-S-21389, U.S. Department of Energy Grants No. DE-AC05-06OR23177 and No. DE-FG02-87ER40365, Research Foundation Flanders (FWO), U.S. National Science Foundation under Grants No. PHY-1415459 and No. PHY-1513524, and Deutsche Forschungsgemeinschaft (DFG) through the Collaborative Research Center [The Low-Energy Frontier of the Standard Model (SFB 1044)] and the Cluster of Excellence [Precision Physics, Fundamental Interactions and Structure of Matter (PRISMA)].

Csar Fernndez Ramrez

Instituto de Ciencias Nucleares, Universidad Nacional Autnoma de Mxico