UNIVERSITA` DEGLI STUDI DI ROMA "TOR VERGATA"
Dipartimento di Fisica

DHF2014 - 1st International Conference on
Dark Matter, Hadron Physics and Fusion Physics
Messina (Italy) September 24th - 26th, 2014.

The baryon spectroscopy program at Jefferson

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ABSTRACT

The study of baryonic excited states provides fundamental information on the internal structure of the nucleon and on the degrees of freedom that are relevant for QCD at low energies. N* are composite states and are sensitive to details of the how quark are confined.
Meson photo-production reactions have provided complementary information to pion-induced reactions since many decades but the recent advent of large solid angle detectors, together with polarized beam and targets, gave access to "complete experiments", where all independent spin observables of a reaction are measured. Constraints from polarization measurements on the experimental side and latest results from Lattice QCD calculations on the theoretical one have opened an "exciting" new era in our understanding of the spectrum of light quarks baryons. Latest results and some future perspectives from the CLAS collaboration are presented.