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An anomalous structure in S=1 meson-baryon scattering in the resonance region[1] DANIEL SADASIVAN, MAXIM MAI, MICHAEL DOERING, George Washington University — We present a simultaneous analysis of s- and p-waves of the S = 1 meson-baryon scattering amplitude using low-energy experimental data. For the first time differential cross section data are included for chiral unitary coupled-channel models. From this model s- and p-wave amplitudes are extracted and we observe both well-known I(J P) = 0(1/2) s-wave states as well as a new I(J P) = 1(1/2 +) state absent in quark models and lattice QCD results. Multiple statistical and phenomenological tests suggest that, while the data clearly require an I = 1 p-wave resonance, the new state accounts for the absence of the decuplet (1385)3/2 + in the model.

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