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The Partial Wave Decomposition of the Meson Spectrum STACY BARKER, University of Richmond, DENNIS WEYGAND, Jefferson Lab, GERARD GILFOYLE, University of Richmond, CLAS COLLABORATION — The spectrum of hadrons provides important insight to the low-energy, non-perturbative regime of Quantum Chromodynamics (QCD), the theory of the strong interaction. Meson states are particularly interesting due to their binary structure; most mesons appear to be composed of a quark-antiquark pair. However, measurement of the meson spectrum is confounded by the broad and overlapping nature of these states. The technique of partial wave analysis (PWA) has been used to successfully decompose these states from the parameters of their decay in limited kinematic regimes, usually high energy and low momentum transfer. To exploit PWA at low energy, for example at CEBAF, the analysis becomes more compute intensive. Here we report on techniques of PWA in a distributed compute environment, using the CLARA platform, a java-based service oriented architecture (SOA) being developed for the CLAS12 offline analysis environment.

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