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Invariant Mass of the $\phi\pi^0$ System. EMILY LAMAGNA, Arizona State University, CLAS COLLABORATION — Exotic mesons are mesons that differ in composition from a normal meson, and are signaled by having unusual spin-parity combinations. The ASU Meson Physics Group and the CLAS Collaboration are interested in finding exotic mesons that decay into $K^+K^-\pi^0$. Since the ϕ meson decays K^-K^+, one path to studying the $K^-K^+\pi^0$ channel is through $\phi\pi^0$ final states. The $\phi\pi^0$ final state is mainly expected to serve as a background to other exotic $K^+K^-\pi^0$ final states. While $\phi\pi^0$ is a possible decay mode for an exotic meson, the decay to the $\phi\pi^0$ channel should be suppressed by more likely processes. By analyzing the reaction $ep \rightarrow ep\phi\pi^0$, we will search for exotic mesons and the vector meson C(1480), which has been reported to decay into $\phi\pi^0$, but has not yet been confirmed. I will present a distribution of invariant $\phi\pi^0$ mass.

Emily LaMagna
Arizona State University

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