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Photoproduction and Decay Modes of the x(1280) Meson RYAN DICKSON, REINHARD SCHUMACHER, Carnegie Mellon University, CLAS COLLABORATION — A meson of mass $m_x = 1281$ MeV and a FWHM of $\Gamma_x = 18$ MeV is seen at Jefferson Lab with CLAS in photoproduction off the proton using real photons in the energy range between 1.9 GeV and 3.4 GeV. Both the $f_1(1285)$ and the poorly-known $\eta(1295)$ are candidates for this observed state. The decay modes seen are $x \to \eta\pi^+\pi^-$, $K^+\bar{K^0}\pi^-$, $K^-K^0\pi^+$, and $K^+K^-\pi^0$ with a substantial fraction going through $a_0(980)\pi$. No signal is seen in $x \to \rho^0\gamma$. The relative branching fraction $\Gamma_{KK\pi}/\Gamma_{\eta\pi\pi}$ is consistent with world data for the $f_1(1285)$ state. The unseen $\rho^0\gamma$ decay mode is not consistent with the $f_1(1285)$ state, however, and may be more consistent with the $\eta(1295)$. Angle and energy dependencies of the measured cross-sections are in fair agreement among the observed decay modes.

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