

Measurement of the Branching Ratio for $\Omega^- \rightarrow \Xi^{*0}(1530)\pi^-$ in the HyperCP Experiment

A clean signal of ~ 50 events has been observed in the rare decay modes $\Omega^- \rightarrow \Xi^- \pi^+ \pi^-$ and $\Omega^- \rightarrow \Xi^{*0}(1530)\pi^-$ using data collected with the HyperCP (E871) spectrometer during Fermilab's 1999 fixed-target program. These results are based on an order of magnitude larger statistics than the previously published results. The relative contribution of each channel is extracted using a Dalitz analysis. We present the first actual measurement of the branching ratio for $\Omega^- \rightarrow \Xi^{*0}(1530)\pi^-$, and an improved branching ratio for $\Omega^- \rightarrow \Xi^- \pi^+ \pi^-$.