

Preliminary Results of the Primex Experiment

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The Primex experiment is a measurement of the neutral pion lifetime by means of the Primakoff effect with an expected precision of 1.5%. This result is a rigorous test of the axial anomaly which is a fundamental prediction of low-energy Quantum Chromodynamics. The data was collected in the Fall of 2004 in Hall B at the Thomas Jefferson National Accelerator Facility with an unique hybrid calorimeter. This detector contained an inner region of PbWO_4 crystals to provide high angular-resolution in the Primakoff region. An outer region of Pb-glass crystals extends the angular acceptance to 4° . Analysis techniques will be discussed, and preliminary results will be presented.