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Report from the Fermilab HyperCP Experiment[1] C. MERRILL JENKINS, University of South Alabama — The Fermilab HyperCP (E871) experiment is searching for CP violation in the decay sequences: $\Xi^- \to \Lambda\pi^- \to p\pi^-\pi^-$ and $\overline{\Xi}^+ \to \overline{\Lambda}\pi^+ \to \overline{p}\pi^+\pi^+$. CP violation is indicated by a difference between the angular distribution of the proton and the antiproton in the Λ and $\overline{\Lambda}$ rest frames. A total of 1.2×10^9 Ξ^- and 0.3×10^9 $\overline{\Xi}^+$ decays were collected in the 1997 fixed target run at Fermilab, resulting in an anticipated sensitivity of 2×10^{-4} in the CP violating asymmetry $A_{\Xi\Lambda} = (\alpha_\Xi\alpha_\Lambda - \overline{\alpha}_\Xi\overline{\alpha}_\Lambda)/(\alpha_\Xi\alpha_\Lambda + \overline{\alpha}_\Xi\overline{\alpha}_\Lambda)$. A discussion of the physics of the experiment and presentation of the status of the analysis will be given.

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