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Production and trapping efficiency improvements for the He-6 experiment¹ YELENA BAGDASAROVA, ALEJANDRO GARCIA, JOBEN PEDERSEN, ERIC SMITH, DEREK STORM, ERIK SWANSON, University of Washington, KEVIN BAILEY, RAN HONG, ARNAUD LEREDDE, PETER MUELLER, TOM P. O'CONNOR, Argonne National Laboratory, XAVIER FLECHARD, CAEN, ANDREAS KNECHT, Paul Scherrer Institute, OSCAR NAVILIAT-CUNCIC, NSCL, FREDERIK WAUTERS, Johannes Gutenberg-Universitt Mainz — The He-6 experiment at the University of Washington aims to precisely measure the beta-neutrino angular correlation ($a_{\beta\nu}$) in the beta decay of He-6, a parameter that is particularly sensitive to tensor-like currents in the electroweak interaction. The experiment is based on a coincidence detection of the beta and recoil ion emitted from laser trapped He-6 and seeks to ultimately measure $a_{\beta\nu}$ to the 0.1% level. In the last year, major efforts have been put into increasing the data acquisition rate in order to obtain statistics for a 1% measurement of $a_{\beta\nu}$. The focus was on improving the the stability of the He-6 production target and increasing trapping efficiency with upgrades to the laser system. These improvements and the current status of the experiment, along with resulting data and calibration improvements, will be discussed.

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