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Estimating the Number of Cosmic Ray Air Showers a Long Duration EUSO-Balloon Flight would Record JEREMY FENN, LAWRENCE WIENCKE, Colorado School of Mines, JEM-EUSO COLLABORATION — EUSO-Balloon is a prototype detector for the Extreme Universe Space Observatory (EUSO) planned for the Japanese Experiment Module (JEM) on the International Space Station (ISS). The EUSO-Balloon's initial flight in Timmons, Ontario (August 2014) lasted approximately four hours at float altitude. Since this was too short to detect cosmic rays a calibrated UV laser was fired across the field of view to simulate the extensive air showers caused by cosmic rays. The next logical step is a long duration EUSO-Balloon flight with the instrument optimized to record extensive air showers. In this presentation I will discuss the planned detector specifications and present the simulation methods used to estimate the expected detection rate of cosmic ray air showers by the EUSO-Balloon.

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