

Abstract Submitted
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Radiation effects testing at the 88-Inch Cyclotron LARRY PHAIR,
Lawrence Berkeley Natl Lab — In addition to basic research, the 88-Inch Cyclotron provides a crucial service to organizations involved in the U.S. space program. The space application testing includes heavy-ion beams for single event upset (SEU) tests on integrated circuits. A “Cocktail” beam (where multiple ions of the same mass/charge ratio are injected into the cyclotron) is used to mimic cosmic ray damage of integrated circuits. Plots of the failure cross section versus amount of energy deposited (LET = linear energy transfer) for different beams are used to predict how the circuit components will perform in a radiation environment such as space. We will review the analysis of such data and their trends.

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