Scaling trends of Cosmic Rays induced Soft Errors in static latches beyond 0.18μ

Tanay Karnik, Bradley Bloechel, K. Soumyanath , Greg Dermer, Vivek De, Shekhar Borkar
Microprocessor Research Labs, Intel Corporation, Hillsboro, OR 97124, USA

Abstract

This paper describes an experiment to characterize soft error rate of static latches for neutrons using a neutron beam, with measured soft error rates as a function of diffusion collection areas and supply voltages. The paper also quantifies the effectiveness of two promising hardening techniques and scaling trends.