

Fast Neutron Irradiation Tests of Electronics

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Abstract

The talk discusses how high energy cascade of neutrons, generated in the earth's atmosphere, represents a major problem in electronic devices and systems. The neutron flux and energy spectrum at ISIS spallation neutron and muon source is able to provide a neutron spectrum similar to the ambient one at sea level, but with an enhancement in intensity of a factor of 10^7 . Such experimental conditions are suitable for accelerated testing of electronic components, providing manufacturers to mitigate against the problem of cosmic radiation.

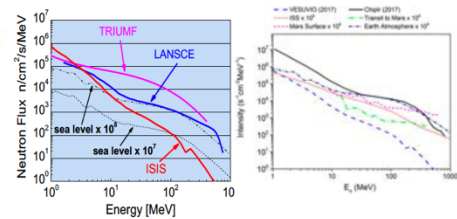
Examples of latest measurements of soft error rates in programmable gate arrays, performed at ISIS facility through the ISIS@MACH Neutron Gate, are presented.



Fast Neutrons Irradiation Tests of Electronic Devices in ISIS@MACH



Facility for fast neutron irradiation tests of electronics at the ISIS spallation neutron source
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