

# PROGRAMMABLE TECHNOLOGIES WEB SITE

This web site is dedicated to the design and use of programmable and quick-turn technologies for space flight applications..

## 1998 Military and Aerospace Applications of Programmable Devices and Technologies Conference (MAPLD Conference)

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C4: Tetsuo Miyahira and Gary Swift  
Jet Propulsion Laboratory / California Institute of Technology

The Use of Advanced Flash Memories in Satellite Applications: Radiation Responses and Mitigation Choices

The density (16 to 128Mbits) and non-volatility of modern, single-voltage flash memories make them particularly attractive to designers for space applications due to resulting savings in mass, volume, and power. The variety of manufacturers producing commercial flash devices makes it likely that of at least one can be found having suitable (fortuitous) radiation resistance. This presentation summarizes test results obtained part way through an ambitious survey of single-event and total-dose responses of current flash choices. Additionally, a number of trends can be identified, including internal architectural considerations affecting total dose responses and operational choices that reduce the occurrence and effects of complex upset modes.

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Curator: Martha O'Bryan  
Last Revised August 07, 1998  
A service of the Engineering Systems Center,  
Web Designer: Richard Katz

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