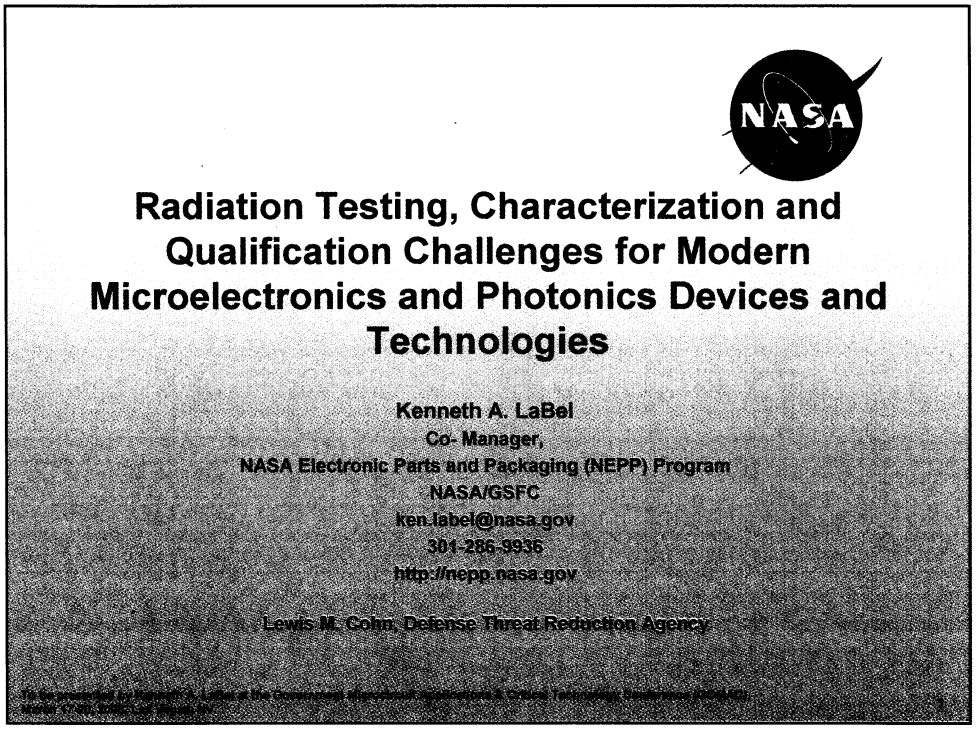
Radiation Testing, Characterization and Qualification Challenges for Modern Microelectronics and Photonics Devices and Technologies
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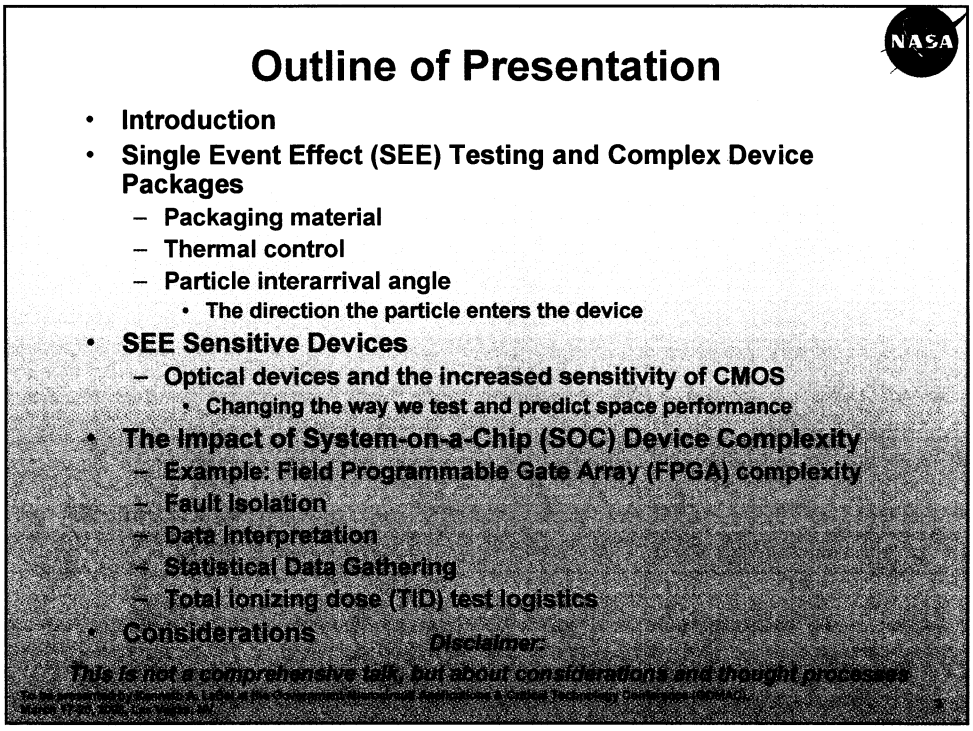
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Changing the way we test and predict space performance
The Impact of System-on-a-Chip (SOC) Device Complexity
Example: Field Programmable Gate Array (FPGA) complexity
Fault Isolation
Data Interpretation
Statistical Data Gathering
Total Ionizing dose (TID) test logistics
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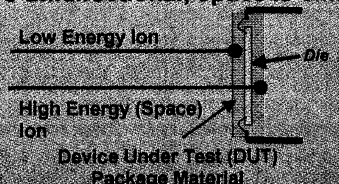

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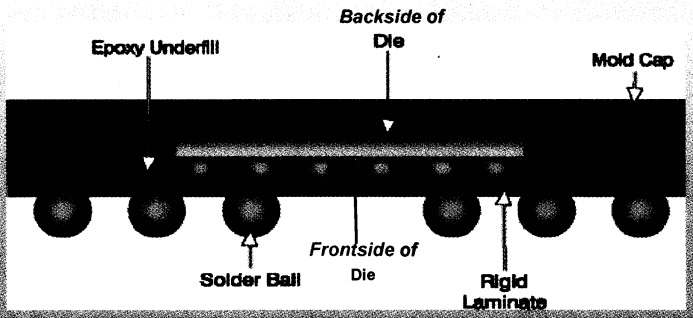

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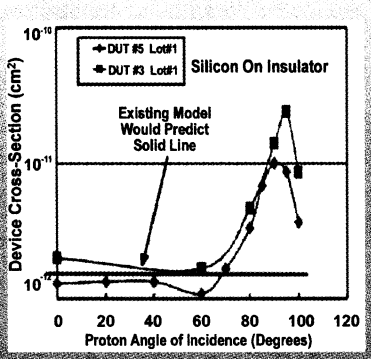

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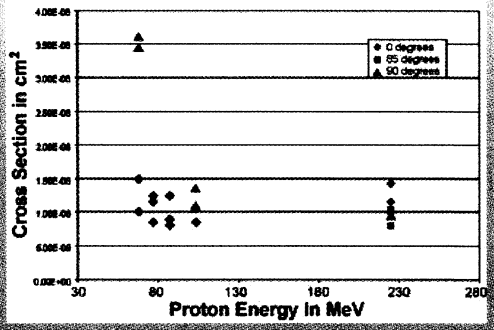

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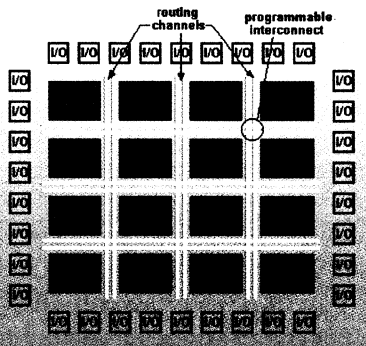

FPGA-architecture

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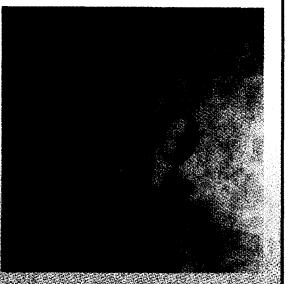

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Considerations

- We have discussed just a few of the emerging challenges related to modern radiation effects testing
  - Device packaging and complexity
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- The final thought is that radiation data must be very carefully scrutinized to understand what the data does or does not contain
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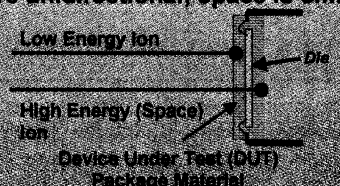

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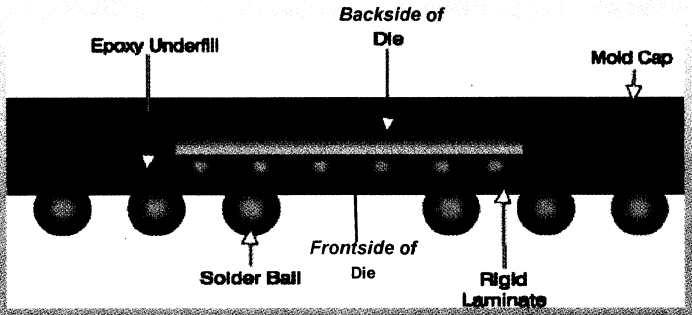

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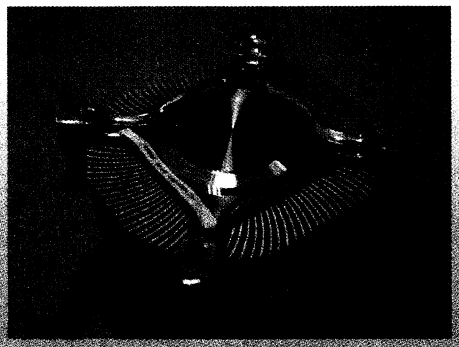

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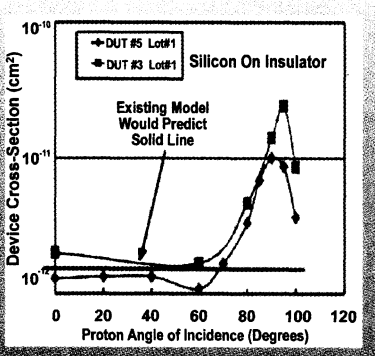

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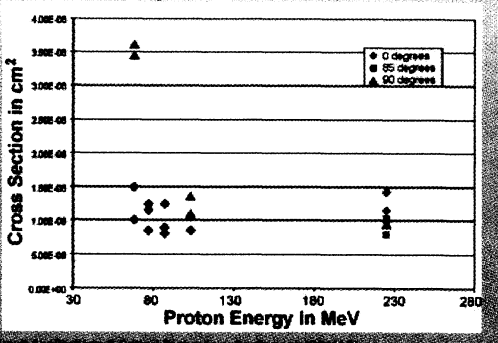

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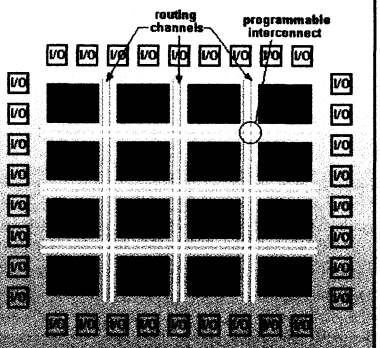

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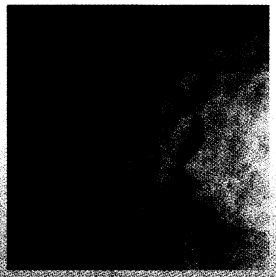

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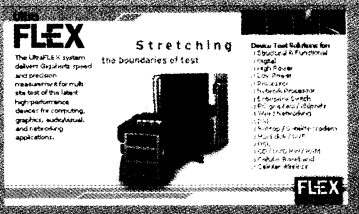

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