

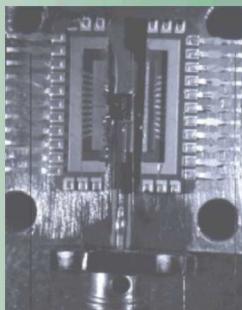
Research

Multiple LDRD projects FY96-FY07

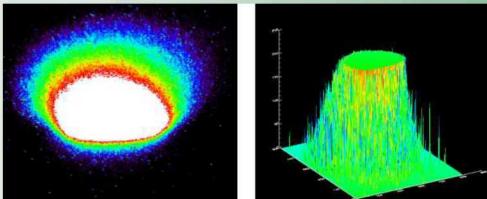
- Designed/modularized integrated solid-state electronics
- Validated short-term radiation resistance
- Ensured weapons life-cycle survivability

FY 1997-99

Memory test chip mounted on a specialized high frequency fixture (TRIBICC Imaging)

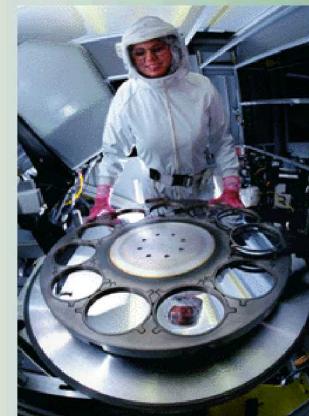


FY 2000 - 2002

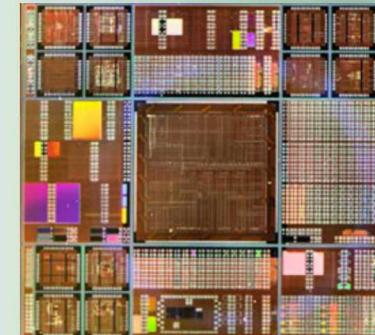


False-color and surface plots of ion beam intensity for a 20-MeV carbon ion TRM irradiation.

Development



Metal disposition systems are used for radiation-hardened microelectronics processing.



Radiation-hardened ASICs for use in nuclear stockpile and nonproliferation missions.

Mission Impact

Current and Future Mission Impacts

Rad-hard ASICs are critical to the performance of nuclear weapons and for systems that operate in space, high altitude, defense systems.

Sandia is scheduled to provide more than 25,000 rad-hard ASICs for the nation's weapons modernization programs FY16-FY25.



B61 Bomb: Currently in phase 6.3 (development engineering) initiated in 2012



W76 Warhead: Currently in phase 6.6 (production)