

STEVEN SCOTT McCLURE

Candidate – Goldbelt Board of Directors

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EXPERIENCE

Jet Propulsion Laboratory (managed by Cal Tech for NASA) **Sept. 2004 to present**

Radiation Control Manager, Europa Clipper Mission – Past Supervisor Radiation Effects Group – Past Parts Program Manager for Mars Phoenix Lander, Prometheus/JIMO, and Juno Jupiter Orbiter Mission

- Responsible for ensuring Europa Clipper spacecraft survivability in space radiation environments
- Develop radiation effects mitigation strategy
- Subcontract and external contracts negotiation and management
- Past Project Element Manager for the JPL Radiation Effects task of the NASA Electronic Parts Program
- Oversight of subcontractor and partner Radiation Control Programs
- Past project account budget responsibility > \$10M
- Line Management experience, 25 employees, radiation test facility, > \$5M/yr

Radiation Effects and Reliability Consulting **Oct. 1990 to Present**

Independent Consultant

- Nuclear and space radiation vulnerability and hardness assurance analysis
- Technical presentations on radiation effects and system survivability
- Customers: Satellite telecommunications operators, aerospace systems manufacturers

Northrop Grumman Space Technology **June 2003 to Sept. 2004**

Senior Staff Engineer, Radiation and Survivability Engineering – Parts survivability engineering lead for the Air Force Advanced EHF satellite system and NASA Jupiter Icy Moons Orbiter (Prometheus/JIMO)

- Responsible for implementation of the parts radiation control plan
- Supported technical project proposals including technical plan as well as cost and schedule
- Managed electronics radiation evaluation and analysis
- Developed test procedures and managed radiation characterization and flight lot acceptance testing

Jet Propulsion Laboratory **Jan. 2000 to May 2003**

Senior Staff Engineer, Electronic Parts Engineering – Project radiation lead for several programs

- Evaluated electronic parts for suitability for radiation environments
- Principle investigator for radiation effects research projects for the NASA Electronic Parts Program
- Developed test procedures and directed ionizing dose, heavy ion and proton tests

Hughes Space and Communications Company (now Boeing) **June 1991 to Jan. 2000**

Senior Staff Engineer, Parts Survivability/Reliability – Project radiation lead for several projects

- Responsible for parts hardness assurance test requirements and procedures
- Supported design and circuit analysis and evaluation of commercial technologies for space applications
- Provide technical content for proposals
- Projects supported: MILSTAR, UHF, EHF, ESP, DirecTV
- Past responsibility: Acting Supervisor of radiation test laboratory, seven employees

Teledyne Systems Company (now Northrop Grumman) **Oct. 1989 to June 1991**

Senior Staff Engineer, Component Engineering – Lead survivability and component engineer, MILSTAR (Air Force)

- Responsible for component and unit level hardness assurance testing and analysis
- Led a group of four component and survivability engineers
- Managed subcontracted total dose and flash x-ray radiation device and system test efforts

Lear Astronics Corporation (now BAE Astronics)

May 1985 to Oct. 1989

Staff Engineer, Component Engineering – Lead component and survivability engineer for several programs

- Directed component test and qualification efforts
- Managed subcontracted radiation survivability analyses
- Provided technical proposal support
- Projects supported: B-2, F-117A, F-16D, F-15E, F-111, JAS-39 (Swedish fighter)
- Drafted component specifications and qualification test procedures

Lawrence Livermore National Laboratory

July 1983 to May 1985

Student Physicist, Pulsed Power Microwave Project

- Performed several independent tests and evaluations of microwave cavity pulse switching methods
- Designed and manufactured a vacuum test chamber for evaluating plasma switch efficiency

EDUCATION

University of California, Los Angeles – M.S. Engineering, Certificate in Engineering Management, 9/17
California Polytechnic State University, San Luis Obispo – B. S. Physics, 9/78 – 3/83

SOCIETAL AFFILIATIONS and SERVICE

- Senior Member Institute of Electronic and Electrical Engineers
- Vice-Chair Radiation Effects Steering Committee, 2021 General Chair
- Nuclear and Plasma Sciences Society, Elected Member Administrative Committee
- Single Event Effects Symposium - Conference Chair 2009
- Nuclear and Space Radiation Effects Conference
 - o Session Chair for Hardness Assurance, Honolulu 2007
 - o Session Chair for Poster Session, Quebec City 2009
 - o Short Course Chair, Las Vegas 2011
 - o Finance Chair, Paris 2014
 - o Local Arrangements Chair, Portland 2016
 - o General Chair, Ottawa 2021
- Radiation Effects on Devices and Electronic Systems
 - o Session Chair for Data Workshop, Bruges Belgium 2009
 - o Session Chair, Hardness Assurance, Biarritz France 2012
 - o Awards Committee Chair, Gothenburg Sweden 2018

PATENT

“Method and apparatus for compensating for ionizing radiation induced threshold shift in metal oxide semiconductor field effect transistors”, U.S. patent 6,509,589. January 21, 2003

SECURITY CLEARANCES HELD

- Department of Energy, “Q” (Top-secret)
- Department of Defense, Secret

PUBLICATIONS

Authored/Co-authored over 40 published papers. Co-author for two receiving Best Conference Paper Award.

REFERENCES

Available on request.