

# Guide to the 2009 IEEE Radiation Effects Data Workshop Record

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**Abstract-- The 2009 Workshop Record has been reviewed and a table prepared to facilitate the search for radiation response data by part number, type, or effect.**

## I. INTRODUCTION

IN this paper a Guide to the 2009 Radiation Effects Data Workshop (REDW) Record is provided [1]. The Workshop Record (WR) published each year is a permanent archive of the REDW. It serves as a key source of radiation response data for the radiation effects community (REC). It also provides descriptions of radiation effects test facilities, standards, and environments. Although the record provides a cumulative index that can be used to locate papers based on author and title it is difficult to search for response data on a particular part number, type, or radiation effect. To simplify this search as an ongoing effort each year a table is prepared for that year's WR [2-5]. In this table the following information is provided for each paper:

- Cumulative Index Number
- Page number in Workshop Record
- Name of first author
- Part Number(s)
- Part Type(s)
- Manufacture(s)
- Data
  - Terrestrial or Flight
- Radiation Effect(s) Evaluated
  - Total Ionizing Dose
    - Co<sup>60</sup> High Dose Rate
    - Co<sup>60</sup> Low Dose Rate (ELDRS)
    - x-ray
    - pions
    - Protons
    - Electrons
  - Single Event Effects due to: heavy ions, protons, neutrons, and laser
    - Single Event Upset (SEU)
    - Single Event Transient (SET)
    - Single Event Functional Interrupt (SEFI)

- Single Event Latchup (SEL)
- Single Event Burnout (SEB)
- Single Event Gate Rupture (SEGR)
- Dose rate
- Displacement Damage
  - Protons
  - Neutrons
- Facilities
- Standard
- Environment
- Shielding

## II. RESPONSE DATA SEARCH

This paper contains the Table for REDW 2009 in Table I. Tables for all WR's are available on the NSREC website <http://www.nsrec.com/redw/>. The tables are provided in Portable Document Format (pdf) and a search can simply be performed using capabilities built into the Adobe Acrobat software. Once the paper(s) with the response data required has been located it is the radiation effects engineer's responsibility to perform a detailed review to establish applicability of the response data. Individual copies of the full papers are available online at IEEE Xplore®.

## III. 2009 WORKSHOP RECORD SUMMARY

The 2009 Workshop Record has thirty high quality papers. It provides: radiation response data on a wide range of devices, circuits, and systems, test facilities descriptions, and dosimetry.

## IV. CONCLUSIONS

The Guide to the 2009 IEEE Radiation Effects Data Workshop provides an efficient way to search for response data on a particular part number, type, or radiation effect.

## V. REFERENCES

- [1] 2009 IEEE Radiation Effects Data Workshop Record, S. Armstrong, Editor, New Jersey, IEEE, 2009.
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- [3] D. Hiemstra, "Guide to the 2006 IEEE Radiation Effects Data Workshop Record," IEEE REDW, pp. 211-214, 2007.
- [4] D. Hiemstra, "Guide to the 2007 IEEE Radiation Effects Data Workshop Record," IEEE REDW, pp. 1-4, 2008.
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