



William A. Seidler II

Research Scientist

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BIO:

Dr. William A. Seidler is currently a Research Scientist supporting the UAHuntsville Propulsion Research Center in the development of its Fusion Propulsion Research Facility. Dr. Seidler successfully brokered the transfer of a 3 terawatt pulse power facility from the Defense Threat Reduction Agency to the UAHuntsville to enable experiments of fusion as a potential propulsion technology for the future of human space flight.

Dr. William Seidler was a Senior Technical Fellow of the Boeing Company with over 40 years of experience in nuclear weapons effects and homeland security. He is one of the country's leading experts in nuclear weapons identification, effects, test and evaluation. He has served as a senior advisor for the Department of Energy Stockpile Stewardship Radiation Effects Program at Sandia National Laboratories and the Deputy for the Boeing Defense, Space and Security Systems on the Senior Technical Fellowship Leadership Team responsible for technical excellence in Boeing's engineering team. Dr. Seidler pioneered the field of box Internal Electromagnetic Pulse (IEMP) and determined the limits to reducing the current delivered to components on circuit boards and verified his analyses through experiments.

Dr. Seidler has received his IEEE Fellow Award in 1990, "for contribution to research in electromagnetic pulse effects," over 50 papers in referred journals and over 20 professional awards.

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RELEVANT PUBLICATIONS:

1. W. Seidler, "The History of the Operate Through Program from Huron King through Disko Elm (U)," submitted to the *Journal of Radiation Effects*, April 2012 (Secret-RD).
2. W. Seidler, D. Walters, H. Harper, C. Mallon, S. Lutjens, J. Weidler, T. Ash, A. Smith, B. Heideman, J. Blackburn, M. Litz, D. Robertson, S. Blomquist, W. Lilley, C. Casaer and M. Salazar, "Measuring Photocurrents and Dose Rate Upset Thresholds in Hardened CMOS/SOS and CMOS/SOI Devices: The Development of a Low-Noise Parts Test Facility at HIFX (U)," *Journal of Radiation Effects*, Volume 28, Number 1, pp 101-121, February 2010 (Unclassified).
3. W. Seidler, O. Kipersztok, K. Wright, "Tools to Identify Nuclear Terrorists (U)," *Journal of Radiation Effects*, Volume 28, Number 1, pp 123-133, February 2010 (Unclassified).
4. W. Seidler, "The Impact of Combined Environment Effects on Radiation Test Facility Development (U)," Invited paper presented to the Hardened Electronics and Radiation Technology Conference, March 11, 1999.
5. W. Seidler, J. Florina, J. Berman, D. Kremer, R. Yao, D. Alexander, J. Deaver, D. Conrad, J. Foy, B. Lilley, J. Vanderwall, M. Salazar, T. Ash, "Sources of Dose Rate Upset in CMOS/SOS Microcircuits (U)," *Journal of Radiation Effects*, Volume 16, Number 1, pp 198 -223, May 1998 (Unclassified).
6. W. Seidler, D. Walters, P. Kolen, L. Follmer, "Neutral Particle Beam Electromagnetic Pulse Effects in Energetic Materials and Circuit Boards (U)," *Journal of Radiation Effects*, Volume 16, Number 1, pp 224 -241, May 1998 (Unclassified).
7. W. Seidler, "Kinematics of an Interceptor's Survival (U)," *Journal of Radiation Effects*, Volume 15, Number 1, pp 19 -32, March 19, 1996 (Unclassified).
8. W. Seidler, W. Summa, "The Future of Test and Certification of Nuclear Survivable Space and Missile Systems (U)," *Journal of Radiation Effects*, Volume 15, Number 1, pp 33 -43, March 19, 1996 (Unclassified).
9. W. Seidler, D. Walters, J. Florian, H. Harper, S. Lutjens, M. Salazar, D. Alexander, A. Smith, B. Heideman, T. Self, G. Gerguson, G. Ovrebo, S. Blomquist, J. Blackburn, J. Vanderwall, "Temperature-Dependent Dose Rate Effects in CMOS/SOS Devices (U)," *IEEE Transactions on Nuclear Science*, Volume 41, Number 5, pp 1770-1779, October 1994 (Unclassified).
10. W. Seidler, H. Harper, D. Walters, and P. Coakley, "Box Hardening Program -Combined Environment Effects (U)," DNA-TR-92-165, May 1993 (Unclassified)
11. W. Seidler, D. Walters, H. Harper, D. Breuner, "Middle Note Box IEMP Instrumentation Test (U)," POR 7229, June 1991 (Secret-RD/CNWDI).
12. W. Seidler, "The Role of Simulation Fidelity in Upgrading and Planning X-Ray Simulation Facilities (U)," *Journal of Radiation Effects*, Volume 9, Number 1 A, pp 74-96, September 19, 1989 (Secret-RD)
13. W. Seidler, D. Walters, L. Follmer, "Scaling Box IEMP to High Fluences (U)," *Journal of Radiation Effects*, Volume 7, Number 1R, pp 27 -38, February, 1988 (Secret-RD/CNWDI).