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SIMION 3D
VERSION 7.0
USER'S MANUAL

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ABSTRACT

The original SIMION was an electrostatic lens analysis and design program developed by D. C. McGilvery at Latrobe University, Bundoora Victoria, Australia, 1977. SIMION for the PC, developed at the Idaho National Engineering and Environmental Laboratory, has evolved as a separate and unique effort. INEEL's sixth major SIMION release, version 7.0, is a greatly enhanced native Win32 program that retains version 6.0's GUI while providing full access to Windows video, printers, clipboards, and metafiles. This C based program can model complex problems using an ion optics workbench that can hold up to 200 2D and/or 3D electrostatic/magnetic potential arrays. Arrays can have up to 50,000,000 points. SIMION 3D's 32 bit Graphics User Interface provides a highly interactive advanced user environment. All potential arrays are visualized as 3D objects that the user can cut away to inspect ion trajectories and potential energy surfaces. New user programs features extend versatility and power. New geometry file options support the definition of highly complex array geometry. Extensive algorithm modifications have improved this version's computational speed and accuracy.

A NOTE TO NEW USERS

Welcome to the SIMION user family. Hopefully, SIMION 3D will prove useful for your needs. ***If you publish work that makes use of this program an acknowledgment would be appreciated.*** Note: In spite of the fact that you may have paid money for this program, remember that it wasn't paid to me. ***This is <u>not</u> the place to call for routine SIMION software support!*** However, you can contact me with regard to other issues or suggestions (be prepared to convince me).

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***** WARNING *****

Acknowledgments

Projects of this sort generally get out of hand and become massive tasks. This is a good description of my experience with SIMION 3D Versions 6.0 and its successor 7.0. I would like to extend sincere appreciation to Anthony D. Appelhans for his valuable observations and careful review of this document. Second, I extend sincere thanks to all who beta tested Version 7.0. I am particularly grateful for the efforts of: Bruno W. Schueler, Dennis J. Chornay, Nyle Utterback, Andrew Doran, Paul Mahaffy, Tom Tyrie, Gregory Wells, and the students of Professors Christie Enke, Richard A. Yost, and Alan G. Marshall who thrashed version 7.0. You made a difference. Further, I would like to thank all the users of the INEEL's previous SIMION versions in the U.S. and beyond. The fact that so many of you have found this program useful has in large measure provided me with the motivation to continue the odyssey to SIMION 3D 7.0.

Credit

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