



Fermi National Accelerator Laboratory

FERMILAB-TM-1834

Revision 5

**Radiation Physics for Personnel and Environmental Protection
Revision 5**

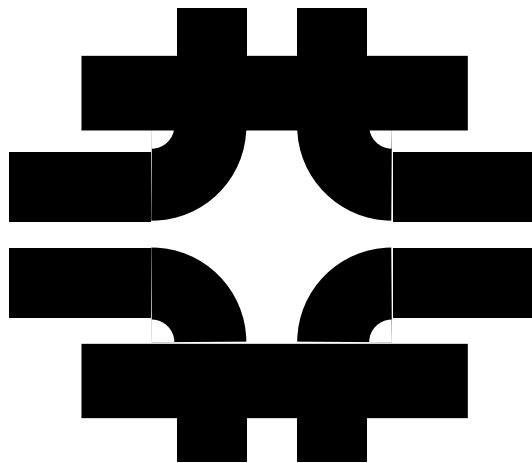
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March 2001

**RADIATION PHYSICS FOR PERSONNEL AND
ENVIRONMENTAL PROTECTION**

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**US PARTICLE ACCELERATOR SCHOOL
Florida State University-1993
Duke University-1995
University of California, Berkeley-1997
Vanderbilt University-1999
Rice University-2001**

**TM-1834
Revision 5, March 2001**

ACKNOWLEDGMENTS

This text is dedicated to my wife Claudia, and our children, Joe and Sally, who provided me with love, cheerfulness, and their support during the long hours spent in the preparation of this and preceding versions of this text. I acknowledge the opportunity provided by Fermilab Director J. Peoples, Jr., to initially participate in the U. S. Particle Accelerator School. The support of my teaching in the USPAS by M. Month, S. Y. Lee, A. L. Read, and W. Griffing has been sincerely appreciated. Members of the Fermilab Environment, Safety and Health Section have greatly assisted me during the preparation and revision of these materials. A. Elwyn deserves special recognition for his helpful advice during the preparation of this text and, indeed, during his entire distinguished career at Fermilab in which he, in so many ways, has been my scientific mentor. N. Grossman, K. Vaziri, and V. Cupps have provided me with very constructive criticism in connection with their assistance in presenting these materials to students in the USPAS. Others at Fermilab whose comments have been helpful are D. Boehnlein, K. Graden, P. Kesich, and E. Marshall. The present complete revision has benefited greatly from the many detailed comments provided by R. Ronningen of the National Superconducting Cyclotron Laboratory at Michigan State University as part of the most recent presentation of this course as a part of the USPAS.

J. Donald Cossairt
March 2001

PREFACE

The original version of this text was presented as part of a course taught at session of the U. S. Particle Accelerator School held at Florida State University in January 1993. Subsequently, the material was further refined and presented as a course at Fermilab in the spring of 1993 and autumn of 1994. Later, the course was presented at the USPAS sessions held at Duke University (January 1995), the University of California, Berkeley (January 1997), Vanderbilt University (January 1999), and Rice University (January 2001). Comments received from the many students have been very helpful in the continued development of this course, and hopefully in its improvement. This comprehensive fifth revision represents a compilation of the work of numerous people and it is hoped that the reference citations lead the reader to the original work of those individuals who have developed this field of applied physics. Over the years, I have been greatly enriched by being personally acquainted with many of these fine scientists. The problems supplied with each chapter were developed with the goal of promoting better understanding of the text.

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Appendix A Summary Descriptions of Commonly Used Monte Carlo Codes

Appendix B Examples of Results of Star Density Calculations Using CASIM

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