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## Preface

Direct involvement with the subject area of the present work dates from my years with NASA at its Electronics Research Center (ERC) in Cambridge, Massachusetts, in the 1960s. However, my approach to the problems of mathematical physics had been shaped earlier in my time as a graduate student in the Mathematics Department at MIT. The passage of time tends merely to further enhance my appreciation of that graduate study program, where I had the benefit of the intensive courses from Norman Levinson, C.-C. Lin, Jürgen Moser, and Eric Reissner. In the case of Reissner, my years as research assistant were a formative apprenticeship — one could say on the “shop-floor”.

The stimulus to organize my convictions in book form came from my friends at Birkhäuser Boston, and I wish to thank Ann Kostant for providing me with the opportunity and support in producing it; a special thanks goes to Edwin Beschler, formerly of Birkhäuser, for his consistent encouragement over the years.

In the course of writing, I had the good-humored support and invaluable help from my one-time teacher and long-time friend, Vincent Hart. He read each chapter as it was written and his sharp eye picked up my many slips and errors. More significantly, his persistent questioning on the original form of Chapter 3 forced me to address all parameter ranges and provide solution forms to cover all possibilities for the case of negative energy.

He also raised the issue of providing illustrations of the various orbit types, a task I was reluctant to undertake. My only escape from the pressure was to invite him to do that part — to which he readily agreed. At that point a young colleague, Seán Murray, provided his precious expertise with Maple; the Appendix is the product of their fruitful cooperation.

In dealing with some difficulties with Euler’s Latin, I had the ready assistance from the Medieval Latin team at the Royal Irish Academy, and I wish to record my thanks to Anthony Harvey, Angela Malthouse, and Jane Power.

The heroic task of typesetting was performed by Martin Stock, and the excellent layout of difficult material speaks for his committed perfectionism. Working from my manuscript was not easy, but his good humor prevailed over all difficulties. As one progresses into the script, the going does not get any

easier, but Martin's professionalism ensured that he finished with a flourish. For such an accomplishment, I am at a loss for words to adequately express my appreciation.

With such help and support, what deficiencies remain must be my sole responsibility.

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