NUCLEAR STRUCTURE PHYSICS

Editors:
S. J. HALL
J. M. IRVINE

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Eighteenth Scottish Universities Summer School
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Nuclear Structure Physics

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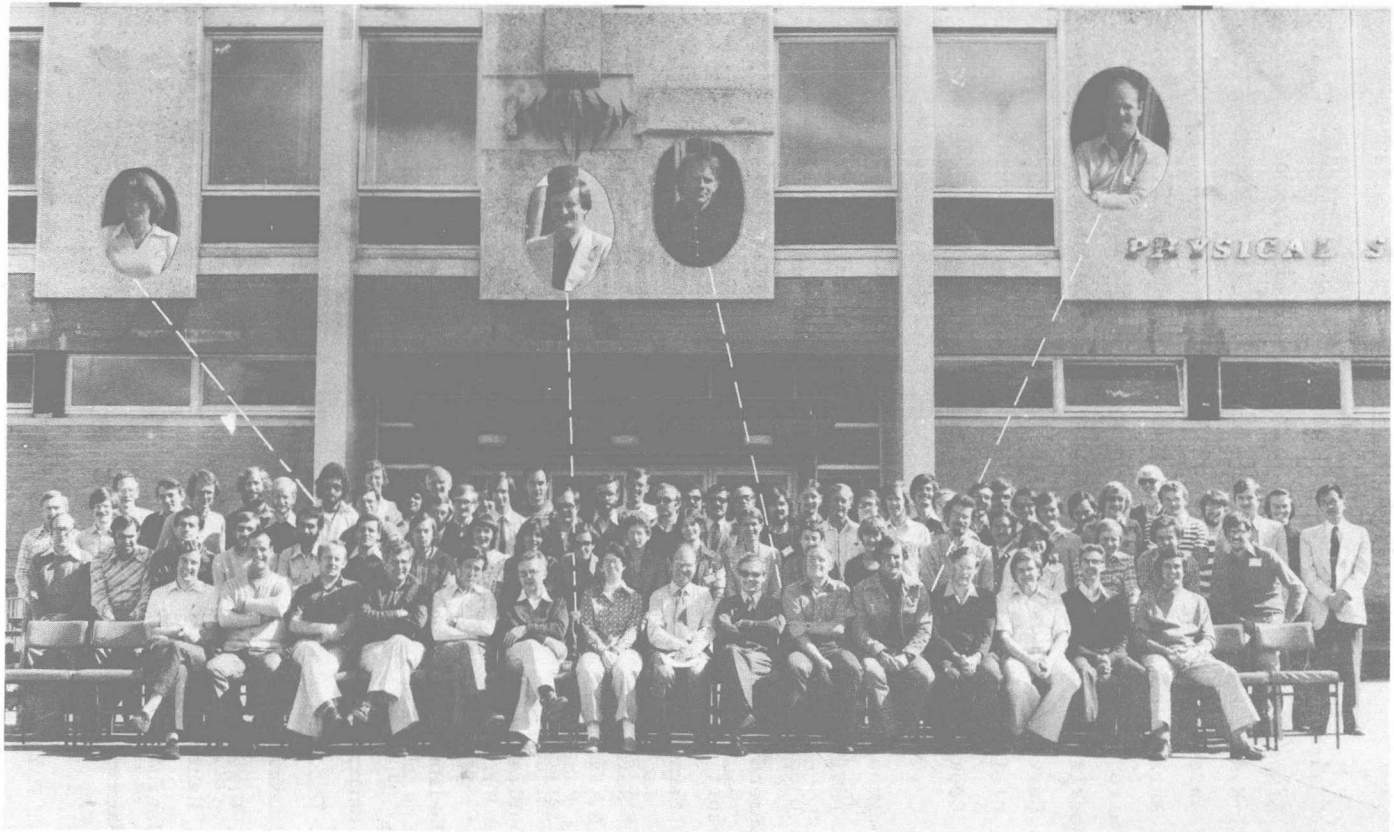
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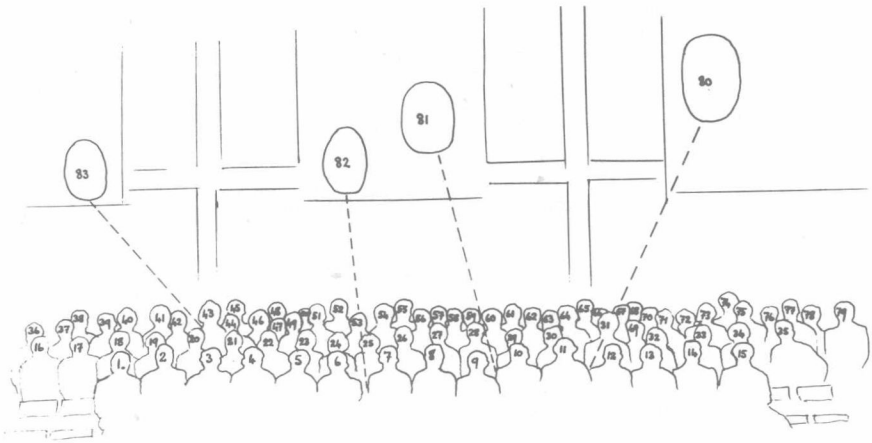

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DIRECTOR'S PREFACE

The Eighteenth Scottish Universities Summer School in Physics was held in the University of St. Andrews from 31st July - 20th August, 1977.

It is twelve years since the Scottish Universities' Summer School in Physics was last devoted to the subject of Nuclear Physics and the school reflected the many advances, both in theoretical understanding and experimental technique, which have taken place in the intervening years. We felt it appropriate to pay particular attention to the developments in heavy ion physics and electromagnetic interactions with nuclei.

We were fortunate to be able to call on a body of lecturers who not only have made considerable personal contributions to these advances but who are also noted for their lecturing skills. Their enthusiasm for their subject was readily transmitted to the students resulting in a very successful school. These Proceedings I believe will prove a significant contribution to the literature on Nuclear Physics and will help to spread the benefits of the school to a larger audience than those who were able to attend.

The School was sponsored by and had the support of the eight Scottish Universities and the Scientific Affairs Division of NATO.

The participants, the lecturers and their families were housed in David Russell Hall and we are greatly indebted to the Warden, Dr. C. Ingram and the Domestic Bursar, Mrs. Ferguson, for the excellent organisation, catering and other arrangements. The lectures and seminars were held in the Physics Building of the University and it is a pleasure to acknowledge the kind assistance and hospitality accorded us by Professor J.F. Allen and his staff. In particular we are grateful to Dr. D.M. Finlayson and Dr. N. McGill.

Finally I wish to acknowledge the contributions made by all those who helped to organise and run the School. Ian Crawford, as Secretary, handled all the correspondence for School before, after and during our stay in St. Andrews. Sam Hall and Max Irvine edited a volume that at times threatened to grow without limit. Rex Whitehead managed to balance the books. Ken Ledingham organised the social activities while my wife Jean arranged the ladies programme. Bob Owen, Alan Shotter and Sandy Watt fetched and carried and generally attended to the hundred and one duties which were required for the smooth running of the School.

EDITORS' NOTE

The articles in this volume have been prepared by the authors and are based closely on the lectures presented at the Summer School. Editing has been minimal, directed towards correcting errors and achieving some degree of uniformity of notation throughout the volume.

In addition to the formal lectures a number of informal seminars on Mesonic Effects in Nuclei, Gas Filled Detectors, Giant Dipole Resonances, Heavy Ion Potentials, Fission, C.W. Accelerators, Giant Multipole Resonances and Photonuclear Reactions were held but these are not recorded in these Proceedings.

We are grateful to J. Spark, T. McQueen and B. McAndie for technical assistance during the period of the School and to Norma Pacholek, Heather Kimber and Pat Anderson for secretarial assistance throughout the preparation of the Proceedings.

Finally, we should like to express our gratitude for the unprecedented co-operation which we received from our Lecturers.

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