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Microscopic Optical Potentials

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P R E F A C E

The Workshop on Microscopic Optical Potentials held at the University of Hamburg, September 25-27, 1978, was arranged on an international level to unite the various theoretical activities in the understanding of elastic and limited inelastic nuclear scattering with a potential model. This volume contains selected topics covered in the contributions and discussions. The contents deal with all projectile masses ranging from nucleons to heavy ions, and projectile energies ranging typically from 10 MeV to pion threshold. Whenever possible, emphasis was placed on microscopic theories which link the nucleon nucleon interaction with aspects of the nuclear many body problem as far as they concern the evaluation of complex optical potentials. For composite projectiles, this put the semiphenomenological folding models in the foreground, together with the analyses of experimental angular distributions. The thereby often shown precision fits defined new standards in precision and theoretical reproduction power. Experimental work per se is not included, and when, then only in a few selected topics.

The guide used in arranging the contents of the proceedings was the projectile mass. The volume begins with the reviews on the nucleon nucleus optical potential and then gradually increases the projectile mass until we reach in the second half the aspects of heavy ion potentials. Towards the end, some special topics regarding the mainstream of the potential theories are included.

On this occasion we should like to thank Mrs. Larsen for her valuable secretarial help in organizing the Workshop and the preparation of this manuscript, as well as Mrs. Berghaus for her assistance in the workshop preparations.

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Hamburg, 1978

H.V. von Geramb

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