QUANTIZED FIELD INTERACTIONS

by

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PREFACE

The following thesis is the result of work done under a Senior Research Scholarship in 1953 and 1954 and a Junior Research Fellowship in 1955 in the Department of Mathematical Physics, University of Adelaide, South Australia. The work was supervised by Professor H.S. Green.

The thesis is in two parts. Part I is an investigation of the physical behaviour that would be expected from particles obeying generalised statistics. The behaviour in scattering experiments and the Statistical Thermodynamics of gases containing non-interacting particles are discussed. Part II is an approximate covariant treatment of the meson-nucleon scattering and bound state problems.

I should like to thank Professor Green for suggestions, discussions and encouragement throughout the course of the work.
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