

Preface

When Pauli taught optics to the students of ETH at Zürich, the main interest of this subject, as of mechanics, was to prepare the students for the ideas of wave mechanics. In this respect the section in this book on Hamilton's theory and its application to anisotropic media in the section on crystal optics are particularly interesting. But otherwise, optics was at Pauli's time a subject of past glory.

This has radically changed with the advent of the laser, which has again put optics on the frontier of science. Subjects such as nonlinear optics and holography, which this year won a Nobel Prize, have opened up entirely new technologies for which a good knowledge of old-fashioned linear classical optics is a necessary preliminary.

This is a fascinating lesson about the unpredictability of the evolution of science. And it is perhaps the best justification for this English translation. For Pauli was not so much interested in detail as in a critical and logical exposition. This makes the present lectures a concise and rewarding introduction to the subject.

The German notes prepared by A. Scheidegger and published in 1948 were not without flaws. This was the reason that Pauli had encouraged a second version of notes prepared by P. Erdős, now Professor at the University of Florida at Tallahassee. If for this translation the first version was chosen after all it was because it reflects better the original spirit and com-

pact style of Pauli. The flaws have been eliminated and some precision has been added in the comments of the appendix. This process of clarification has made the work of the translators worth special mention. As editor I am quite pleased to see that the hard work of all of us has produced an improved version of a course I always liked.

Charles P. Enz

Geneva, 2 November 1971