

**AN INTRODUCTION TO PHYSICAL  
MEASUREMENTS: WITH  
APPENDICES ON ABSOLUTE  
ELECTRICAL MEASUREMENT,  
ETC.**

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An Introduction to Physical Measurements: With Appendices on Absolute Electrical Measurement, Etc. by Dr. Friedrich Kohlrausch & Thomas Hutchinson Waller & Henry Richardson Proctor

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**DR. FRIEDRICH KOHLRAUSCH & THOMAS  
HUTCHINSON WALLER & HENRY RICHARDSON PROCTOR**

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MEASUREMENT, ETC.**



*Daniel W. Mead.*

AN INTRODUCTION

TO

PHYSICAL MEASUREMENTS,

WITH APPENDICES ON

ABSOLUTE ELECTRICAL MEASUREMENT, ETC.

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Translated from the Second German Edition,

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AND

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## PREFACE.



THE Author, in the preface to the second German edition, gives a sketch of the purposes which he hopes that the present book will serve. He says, a truth which all experience confirms, that the mere verbal teaching of physical laws is seldom of much use, tending frequently merely to confuse the student; while the simple performance of an experiment gives him confidence in himself and in the laws he is investigating. Another use of such a manual in the education of the scientific student is to lead him, by means of measurements which can be independently verified, to that knowledge of his powers which is so important when he has to do any original work. The greater part of the treatise is devoted to measurements of physical quantities. From this circumstance we have thought its object better expressed by the title we have placed at the head of it than by a literal translation of the German one.

Descriptions of apparatus are but rarely given, as students mostly have instruments provided for them, and seldom have to make their own apparatus, or to put it together.

The mathematical knowledge required is but very elementary, as the proofs of the formulæ are only given when they present no complex arguments.

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The body of the work and the Appendix on Absolute Measure is, with little exception, an almost literal translation from the second German edition; but the Translators alone are responsible for the remaining Appendices and for several additional Tables.

THOMAS H. WALLER.

HENRY R. PROCTER.

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