INTERNATIONAL CENTRE FOR MECHANICAL SCIENCES

COURSES AND LECTURES - No. 53

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GYRODYNAMICS

COURSE HELD AT THE DEPARTMENT
OF GENERAL MECHANICS
OCTOBER 1970

UDINE 1974

SPRINGER - VERLAG

WIEN - NEW YORK

Printed in Italy

ISBN 3-211-81229-6 Springer-Verlag Wien-New York

ISBN 0-387-81229-6 Springer-Verlag New York-Wien

PREFACE

The peculiar motions of spinning bodies have always fascinated mathematicians, physicists and engineers. Indeed, the literature relating to the problems of spinning bodies has long since grown to such an extent as to become almost unsurveyable. It may therefore be useful and desirable to summarize thy most important results on the theory of spinning bodies and, what is more, to present them from some unified points of view. In doing so it is primarily intended to create a kind of bridge between the classical theory of spinning bodies and the more recent results obtained in the course of applications in technology, navigation and space travel. Although individual gyroscopic intruments will not be discussed in the course of these lectures, it is nevertheless proposed to examine the most important general phenomena that occur in them, including the effects of oscillation, rectifying effects, and problems of tuning.

In preparing the texts of these lectures I have made use of some sections of my book "Kreisel, Theorie und Anwendungen" (Gyros, Theory and Applications) published in 1971 by the publishing house of J. Springer, Berlin. I am therefore indebted to the publishers for the consideration they have shown me in making possible the preparation and publication of these greatly abbreviated lecture notes.

I should also like to express my thanks to the International Centre of Mechanical Sciences and, more particularly, to its untiring and ever-fertile director, Professor Dr. Luigi Sobrero.
My thanks are due not only for the suggestion to hold this course of lectures at the Centre in Udine about my special field of work, but also for the unfailing help and support that has been given in realizing this project.

K. Magnus

Udine, October 1970