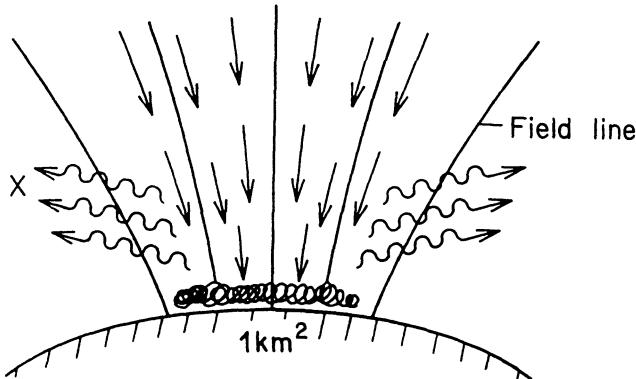


N. Straumann, University of Zurich

General Relativity and Relativistic Astrophysics



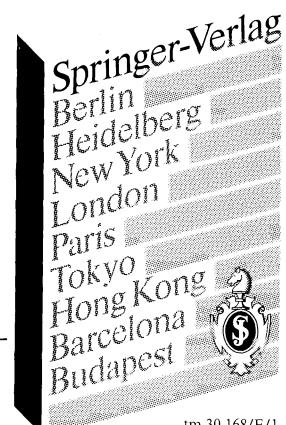
1991. XIII, 459 pp.
81 figs. (Texts and
Monographs in
Physics) Softcover
DM 72,-
ISBN 3-540-53743-0

This study edition of Straumann's well-known textbook is intended for students in physics, astrophysics, and mathematics. It concentrates on the physical content of Einstein's famous theory. The mathematical background of modern differential geometry is kept to a minimum and serves mainly as a reference for the reader unfamiliar with Cartan's coordinate-free calculus, which is used throughout the book. The author discusses in detail the equivalence principle and the field equations together with their experimental support by very recent observations. The last part covers much ground in modern astrophysics. It carefully analyses the Kerr-Newman-solutions, gravitational collapse, the cooling of neutron stars, radio sources, and black holes. The book should become a standard text for a modern treatment of the problems of gravitation.

Deutsche Ausgabe:

N. Straumann, **Allgemeine Relativitätstheorie und relativistische Astrophysik.** (Lecture Notes in Physics, Vol. 150). 2. Aufl. 1988. DM 62,50
ISBN 3-540-18763-4

-
- Heidelberger Platz 3, W-1000 Berlin 33, F R Germany
 - 175 Fifth Ave., New York, NY 10010, USA
 - 8 Alexandra Rd., London SW19 7JZ, England
 - 26, rue des Carmes, F-75005 Paris, France
 - 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan
 - Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong
 - Avinguda Diagonal, 468-4° C, E-08006 Barcelona, Spain



tm 30 168/E/1

Communications in **Mathematical Physics**

Chief Editor A. Jaffe, Cambridge, MA

Editorial Board M. Aizenman, Princeton, NJ
H. Araki, Kyoto
A. Connes, Bures-sur-Yvette
J.-P. Eckmann, Genève
M. E. Fisher, College Park, MD
J. Fröhlich, Zürich
K. Gawędzki, Bures-sur-Yvette
M. Herman, Palaiseau
J. L. Lebowitz, New Brunswick, NJ
N. Yu. Reshetikhin, Cambridge, MA
B. Simon, Pasadena, CA
Ya. G. Sinai, Moscow
T. Spencer, Princeton, NJ
S.-T. Yau, Cambridge, MA

Advisory Board M. F. Atiyah, Oxford
F. Hirzebruch, Bonn
G. 't Hooft, Utrecht
R. Schrieffer, Santa Barbara, CA
I. Singer, Cambridge, MA
C. N. Yang, Stony Brook, NY

Responsible for Advertisements

Springer-Verlag
Printers
Printed in Germany

E. Lückermann, M. Stresow, Heidelberger Platz 3, 1000 Berlin 33, FRG
Telephone: (030) 8207-1, Telex 01-85411, FAX (030) 820 7300
Berlin Heidelberg New York Tokyo Hong Kong Barcelona Budapest
Brühlsche Universitätsdruckerei, Giessen
© Springer-Verlag Berlin Heidelberg 1991
Springer-Verlag GmbH & Co KG, 1000 Berlin 33, Federal Republic of Germany