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Landolt-Börnstein

Numerical Data and Functional Relationships in Science and Technology

New Series / Editor in Chief: W. Martienssen

Group VI: Astronomy and Astrophysics

Volume 4

Astronomy, Astrophysics, and Cosmology

Subvolume B

Solar System

Editor

Joachim E. Trümper

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Springer

ISSN 0942-8011 (Astronomy and Astrophysics)

ISBN 978-3-540-88054-7 Springer Berlin Heidelberg New York

Library of Congress Cataloging in Publication Data:

Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology, New Series.

Editor in Chief: W. Martienssen.

Group VI, Volume 4: Astronomy, Astrophysics, and Cosmology.

Subvolume B: Solar System.

Edited by J. E. Trümper.

Springer-Verlag, Berlin, Heidelberg, New York 2009.

Includes bibliographies.

1. Physics - Tables. 2. Chemistry - Tables. 3. Engineering - Tables.

I. Börnstein, Richard (1852-1913). II. Landolt, Hans (1831-1910).

QC 61.23 502'.12

62-53136

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Printed in Germany

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Cover layout: Erich Kirchner, Heidelberg

Typesetting: Authors and SciCaster (Dr. Christian Meier), Darmstadt

Printing and Binding: AZ Druck, Kempten/Allgäu

SPIN: 11339809

63/3020 - 5 4 3 2 1 0 - Printed on acid-free paper

Preface

The last few decades have been called the “Golden Age of Astronomy”. The rapid increase of knowledge in the field necessitates publishing a new edition of the Astronomy and Astrophysics volumes of the Landolt-Boernstein. The title is now “Astronomy, Astrophysics, and Cosmology”. Cosmology has been added in order to make allowances for the increasing role of extragalactic astrophysics and cosmology.

The present volume VI/4B on the “Solar System” is the first to be published of the new series. Volume VI/4A on “Instruments and Methods” will follow soon. Additional volumes on “Stars”, the “Galaxy”, “Galaxies, Large Scale Structure and Cosmology” are in the planning stage.

The previous volumes covering the Solar System appeared in 1965, 1981 and 1993. In the meantime multi-wavelength observations of the sun – by ground based and space borne telescopes – have produced a wealth of new data. The same is true for telescopic and/or in situ investigations of the planets, moons, asteroids, meteors, meteorites, interplanetary dust, solar wind etc.

The use of units for physical quantities in the present volume follows largely the rules given by the International Astronomical Union (IAU), c.f.

http://www.iau.org/science/publications/proceedings/_rules/units/,

which favour the international system (SI) of units. However, the centimetre-gram-second (CGS) system is used in some sections of the present volume, since it is still dominating in certain areas of astrophysics. A table with unit conversion of CGS to SI is given on the inside of the back cover of this book.

A total number of 32 scientists actively working in their respective fields have contributed to the present volume. I thank all of them for their excellent work and the smooth collaboration. I am also grateful to the editorial staff of Landolt-Börnstein for their efficient support, in particular to Dr. Wolfgang Finger and his successor, Mrs. Dipl.-Phys. Antje Endemann, who are responsible for converting manuscripts into printed articles.

Garching, Germany, April 2009

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Tiergartenstraße 17

D-69121 Heidelberg, Germany

e-mail: Redaktion.Landolt-Boernstein@springer.com

Internet

<http://www.landolt-boernstein.com>

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