

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Record Nr.           | UNINA9910143966803321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Titolo                  | The Rotation of Sun and Stars [[electronic resource] /] / edited by Jean-Pierre Rozelot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Pubbl/distr/stampa      | Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2009                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| ISBN                    | 3-540-87831-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Edizione                | [1st ed. 2009.]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Descrizione fisica      | 1 online resource (X, 264 p. 118 illus., 28 illus. in color.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Collana                 | Lecture Notes in Physics, , 0075-8450 ; ; 765                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Disciplina              | 523.73                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Soggetti                | Observations, Astronomical<br>Astronomy—Observations<br>Geophysics<br>Astrophysics<br>Space sciences<br>Astronomy, Observations and Techniques<br>Geophysics/Geodesy<br>Astrophysics and Astroparticles<br>Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics)<br>Sun Rotation                                                                                                                                                                                                                                                                                                                           |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Note generali           | Bibliographic Level Mode of Issuance: Monograph                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Nota di bibliografia    | Includes bibliographical references and index.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Nota di contenuto       | The Sun: A Slowly Rotating Star -- What Is Coming: Issues Raised from Observation of the Shape of the Sun -- Effects of Rotation on Stellar p-Mode Frequencies -- Approaching the Low-Frequency Spectrum of Rotating Stars -- The Rotation of the Solar Core -- Physics of Rotation in Stellar Models -- Long Baseline Interferometry of Rotating Stars Across the HR Diagram: Flattening, Gravity Darkening, Differential Rotation -- Is the Critical Rotation of Be Stars Really Critical for the Be Phenomenon? -- On the Rotation of A-Type Stars -- The Solar Magnetic Field: Surface and Upper Layers, Network and Internetwork Field. |
| Sommario/riassunto      | The Sun and stars rotate in different ways and at different rates of velocity, and knowledge of how they rotate is important in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

understanding the formation and evolution of stars and their structure. The wide variety of stars offers an equally wide variety of rotation rates and rotational evolution. From the slowly rotating stars to stars rotating close to their breakup velocities, different techniques and models have to be developed to study rotation and its effects on physical aspects of stars. In fact, one currently witnesses a complete renewal of astrophysical ideas about stellar rotation, mainly due to the development of new models including high-order effects of rotation and magnetism. This book, while not attempting to answer all questions about rotation, given that many issues still have to be further investigated, focuses on the basics and some particular aspects while aiming to show why it is important, from a physical point of view, to study stellar rotation. Based on courses given at a graduate school, these tutorial lectures will be of interest and useful to a rather broad audience of scientists and students.

---