Record Nr. UNINA9910741188303321 Autore Byrne Charles J Titolo The moon's near side megabasin and far side bulge / / Charles J. Byrne Pubbl/distr/stampa New York, : Springer Science, 2013 **ISBN** 1-4614-6949-X Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (138 p.) SpringerBriefs in astronomy Collana 523.3 Disciplina Soggetti Astronomy Moon Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Foreword -- Chapter 1: The asymmetric nature of the Moon differences between the near and far sides -- Chapter 2: Impact dynamics from craters to ringed basins to giant basins -- Chapter 3: A model of large lunar impact cavities and their external ejecta --Chapter 4: The search for ancient impacts -- Chapter 5: The Near Side Megabasin -- Chapter 6: Age of the Near Side Megabasin -- Chapter 7: The far side megabasin (the South Pole – Aitken Basin) -- Chapter 8: A dynamic model of the history of the Moon -- Chapter 9: Implications to the surface mineral distribution and thermal history of the Moon --Chapter 10: Alternate explanations for the shape of the Moon --Chapter 11: The need for ground truth of the far side of the Moon --Chapter 12: Summary -- Index. Since Luna and Lunar Orbiter photographed the far side of the Moon. Sommario/riassunto the mysterious dichotomy between the face of the Moon as we see it from Earth and the side of the Moon that is hidden has puzzled lunar scientists. As we learned more from the Apollo sample return missions and later robotic satellites, the puzzle literally deepened, showing asymmetry of the crust and mantle, all the way to the core of the Moon. This book summarizes the author's successful search for an ancient impact feature, the Near Side Megabasin of the Moon and the extensions to impact theory needed to find it. The implications of this ancient event are developed to answer many of the questions about the

history of the Moon.