Record Nr. UNINA9910300396703321 GRAIL: Mapping the Moon's Interior [[electronic resource] /] / edited by **Titolo** Maria Zuber, Christopher Russell Pubbl/distr/stampa New York, NY:,: Springer New York:,: Imprint: Springer,, 2014 **ISBN** 1-4614-9584-9 Edizione [1st ed. 2014.] 1 online resource (80 p.) Descrizione fisica Disciplina 500.5 520 523.4 530 Space sciences Soggetti Planetology Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Moon Internal structure Moon Gravity Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di contenuto Gravity Recovery and Interior Laboratory (GRAIL): Mapping the Lunar Interior from Crust to Core -- The Scientific Measurement System of the Gravity Recovery and Interior Laboratory (GRAIL) Mission -- The Lunar Gravity Ranging System for the Gravity Recovery and Interior Laboratory (GRAIL) Mission. Sommario/riassunto In September 2011, the GRAIL mission launched two unmanned spacecraft to the Moon, which entered into lunar orbit on December 31. 2011 and January 1, 2012. They orbited the Moon until December 17, 2012, when they impacted the surface near the Moon's north pole. This book contains three review articles co-authored by the GRAIL Science Team and Guest Scientists that describe the reasons for the GRAIL mission, the development of the necessary technology, and the design of the mission to acquire the most precise measurements of the lunar gravity field possible today. The book provides a detailed description of

the GRAIL mission's scientific objectives, the instrumentation and its

required performance, the complex simulation of the measurement system for determining the gravity field, and the innovative education and public outreach of the mission directed toward middle-school students who could select areas of the Moon for imaging with the onboard MoonKam camera system. This volume is aimed at researchers and graduate students active in solar system science and planetology. Originally published in Space Science Reviews journal, Vol. 178/1, 2013.