Record Nr. UNINA9910438110603321 Towards understanding the climate of Venus: applications of terrestrial **Titolo** models to our sister planet / / Lennart Bengtsson ... [et al.], editors Pubbl/distr/stampa New York, : Springer, 2013 **ISBN** 1-283-93384-5 1-4614-5064-0 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (187 p.) Collana ISSI Scientific Report Series; ; 11 Altri autori (Persone) BengtssonLennart Disciplina 551.50999 551.50999/22 551.5099922 Soggetti Climatology Atmospheric physics Extrasolar planets Venus (Planet) Atmosphere 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 pt. 1. What do we know about Venus? -- pt. 2. Modeling the atmospheric circulation of Venus -- pt. 3. Outlook. ESA's Venus Express Mission has monitored Venus since April 2006. Sommario/riassunto and scientists worldwide have used mathematical models to investigate its atmosphere and model its circulation. This book summarizes recent work to explore and understand the climate of the planet through a research program under the auspices of the International Space Science Institute (ISSI) in Bern, Switzerland. Some of the unique elements that are discussed are the anomalies with Venus' surface temperature (the huge greenhouse effect causes the surface to rise to 460°C, without which would plummet as low as -40°C), its unusual lack of solar radiation (despite being closer to the Sun, Venus receives less solar radiation than Earth due to its dense cloud cover reflecting 76% back) and the juxtaposition of its atmosphere and planetary rotation (wind speeds can climb up to 200 m/s, much faster than Venus' sidereal day

of 243 Earth-days).