Record Nr. UNINA9910782335303321 Autore Thomas John H. <1941-> Titolo Sunspots and starspots // John H. Thomas, Nigel O. Weiss [[electronic resource]] Cambridge:,: Cambridge University Press,, 2008 Pubbl/distr/stampa 1-107-19644-2 **ISBN** 1-281-94491-2 9786611944919 0-511-45628-X 0-511-45759-6 0-511-45459-7 0-511-45357-4 0-511-53634-8 0-511-45562-3 Descrizione fisica 1 online resource (xvi, 275 pages) : digital, PDF file(s) Collana Cambridge astrophysics;; 46 Disciplina 523.7/4 Soggetti Sunspots Starspots Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali Nota di bibliografia Includes bibliographical references (p. 246-270) and index. The sun among the stars -- Sunspots and starspots : a historical Nota di contenuto introduction -- Overall structure of a sunspot -- Final structure of the umbra -- Fine structure of the penumbra -- Oscillations in sunspots --Sunspots and active regions -- Magnetic activity in stars -- Starspots -- Solar and stellar activity cycles -- Solar and stellar dynamos -- Solar activity, space weather, and climate change -- The way ahead --Appendix 1: Observing techniques for sunspots -- Appendix 2: Essentials of magnetohydrodynamic theory. The past two decades have seen remarkable advances in observations Sommario/riassunto of sunspots and their magnetic fields, in imaging of spots and fields in distant stars and in associated theoretical models and numerical simulations. This book provides a comprehensive combined account of

the properties of sunspots and starspots. It covers both observations

and theory, and describes the intricate fine structure of a sunspot's magnetic field and the prevalence of polar spots on stars. The book includes a substantial historical introduction and treats solar and stellar magnetic activity, dynamo models of magnetic cycles, and the influence of solar variability on the Earth's magnetosphere and climate. This volume is a valuable reference for graduate students and specialists in solar and stellar physics, astronomers, geophysicists, space physicists and experts in fluid dynamics and plasma physics.