Until recently it was generally doubted that the solar variability in the 11-year sunspot cycle (SSC), as measured by satellites, has a direct influence on the atmosphere. However, there is now general agreement that the direct influence of changes in the UV part of the solar spectrum (6 to 8% between solar maxima and minima) leads to more ozone and warming in the upper stratosphere (around 50 km) in solar maxima. These observations in the solar-terrestrial environment suggest that the effects of solar variability are transmitted to the atmosphere through energy emission, which basically consists of three modes: blackbody radiation, solar electromagnetic emission, and ionospheric processes. In the early days, phenomena in each plasma state, commonly known as sunlight, and the second region were studied separately, but with the progress of research, we realized the importance of treating and understanding the whole chain of processes as an entity because of stratosphere 1 online resource (xiv, 539 pages): The Handbook of the Solar-Terrestrial Environment is a unique compendium. Recognized international leaders in their field contribute chapters on basic topics of solar physics, space plasmas and the Earth's magnetosphere, and on applied topics like the aurora, magnetospheric storms, space weather, space climatology and planetary science. Includes bibliographical references and index. Print version record. An Overview of the Solar-Terrestrial Environment -- An Overview of the Solar-Terrestrial Environment -- The Sun -- The Solar Interior -- Radial Structure -- The Journal of Atmospheric and Solar-Terrestrial Physics (JASTP) is an international journal concerned with the inter-disciplinary science of the Earth's atmospheric and空间 environment, especially the highly varied and highly variable physical phenomena that occur in this natural laboratory and the processes that couple them. The journal covers the physical processes operating in the troposphere, stratosphere, mesosphere, thermosphere, ionosphere, magnetosphere, the Sun, interplanetary medium, and heliosphere. Phenomena occurring in other "spheres," solar influences on climate Yohsuke Kamide Abraham C.-L. Chian (Eds.) Handbook of the Solar-Terrestrial Environment With 255 figures, including 63 color figures. 123. Yohsuke Kamide. Abraham C.-L. Chian. The study of the solar-terrestrial environment endeavors to understand quantitatively the conditions of the Earth's magnetosphere and its upper atmosphere, including the ionosphere and the thermosphere, influenced by the activity of the solar atmosphere and the solar wind that travels in the interplanetary space. We also feel that it is quite timely to launch this book because the effects of space weather and space climate, that are applications of the solar-terrestrial research, have recently become an important societal concern.