ARTICLE

SPACE WEATHER AND ITS EFFECTS ON HUMAN TECHNOLOGY

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The term "Space Weather", rather new in Space Physics, refers to conditions on the Sun, Solar Wind, Magnetosphere, Ionosphere, and thermosphere that can influence the performance and reliability of space-borne and ground-based technological systems and can endanger human life and health. In this article, we first discuss briefly the plasma processes in the Sun-Earth coupled system, which go into the making of the space weather. The effects of variations in the space environment on ground- and space-based sophisticated technical systems are then illustrated with few examples pointing out some interesting historical events that were indicative of the impact of space on technologies in the pre-space era and the causes of these effects in the light of present-day understanding of the space. Finally, an overview of the efforts by the scientific community to predict and forecast the hazardous space weather is presented.