

1. Record Nr.	UNINA9910734347003321
Titolo	GNSS, Space Weather and TEC Special Features // edited by Jose Fernandez, Juan F Prieto, Serdjo Kos
Pubbl/distr/stampa	[Place of publication not identified] : , : MDPI - Multidisciplinary Digital Publishing Institute, , 2023
Descrizione fisica	1 online resource (332 pages)
Disciplina	629.416
Soggetti	Space environment
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	In the domain of electronic navigation, satellite navigation (GNSS) is one of the most important complex modern systems. GNSS is a key aspect of infrastructure which supports the development and improvement of power grid systems, banking operations, global transportation systems, and global communication systems. Today, GNSS requires the use of several positioning networks and sensors, such as radio networks and MEMS. The Earth's atmosphere, particularly the ionosphere and troposphere, can be seen as a huge laboratory where multiple processes and phenomena directly affecting the propagation of EM waves occur. Like all complex systems, GNSS technology has also gone through certain evolutionary stages. Factors affecting the future evolution of GNSS technology include the appearance of new signals and frequencies, complementary technologies in use, etc., but in the domain of GNSS technologies, it is essential to study the impact of space weather on GNSS systems. A key part of research related to GNSS technologies is the vertical TEC distribution and anomalies related to earthquakes and volcanic eruptions on Earth. There are many challenges that need to be addressed because they affect reliability, accuracy, and all other essential parameters of GNSS systems. It addresses some of these issues by publishing manuscripts which study GNSS risk assessment, different effects of space weather disturbances on the operation of GNSS systems, environmental impacts on the

operation of GNSS systems, GNSS positioning error budgets, TEC
special features in volcano eruptions, and similar topics.
