

Recent domestic activities and NICT's efforts for the advancement of space weather forecasting

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In recent years, the use of space has been rapidly advancing in the business sector, with the realization of commercial space travel and the advancement of satellite communication plans using commercial small satellite constellations, while solar activity has been gradually increasing, with the first X-class solar flare in four years occurring in July 2021. The importance of space weather forecasting is increasing in preparation for disasters caused by large-scale space weather phenomena, such as the Carrington Event of 1859.

Under these circumstances, various countries and international organizations, including the United States, the United Kingdom, and South Korea, have been studying the impact of space weather phenomena on social infrastructure and how to respond to them. In Japan, a study group on the advancement of space weather forecasting has been held by the Ministry of Internal Affairs and Communications since January 2022. Under this study group, a working group was established to study the specifics of new types and thresholds of space weather warnings taking into account the social impact of space weather.

In this presentation, I will report on the recent domestic activities for the advancement of space weather forecasting and the related efforts of NICT.

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