Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

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ACG004-11 Room:104 Time:May 27 09:00-09:15

Solar Activity and Space Weather

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The Sun is producing short time variabilities such as a solar flare in a second time scale, and long time variabilities such as an 11 year sunspot cycle. The condition of the solar-terrestrial environment based on short time variabilities is called "space weather", and that due to long time variabilities is called "space climate". We review solar activity as a source of energy of these terrestrial environments. Finally, we discuss the possibility of occurrence of a superflare whose energy is 10 - 1,000,000 times that of the largest solar flare even occurred on the Sun in these 20 years, and its influence on the terrestrial environment.

Keywords: solar activity, space weather, flare, space climate, sunspot cycle, superflare

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