

第二期 GEMSIS-Sun プロジェクト GEMSIS-Sun phase 2

増田 智^{1*}, 草野 完也¹, 松原豊¹, 三好 由純¹, 今田 晋亮¹, 山本 哲也¹, 塩田 大幸², 浅井 歩³, 藁島 敬⁴, 渡邊 恭子⁵, 井上 諭⁶

Satoshi Masuda^{1*}, Kanya Kusano¹, Yutaka Matsubara¹, Yoshizumi Miyoshi¹, Shinsuke Imada¹, Tetsuya Yamamoto¹, Daikou Shiota², Ayumi Asai³, Takashi Minoshima⁴, Kyoko Watanabe⁵, Satoshi Inoue⁶

¹ 名古屋大学太陽地球環境研究所, ² 理化学研究所, ³ 京都大学, ⁴ 海洋研究開発機構, ⁵ 宇宙航空研究開発機構, ⁶ キョンヒュー大学

¹STEL, Nagoya University, ²RIKEN, ³Kyoto University, ⁴JAMSTEC, ⁵JAXA, ⁶Kyung Hee University

Solar-Terrestrial Environment Laboratory (STEL) in Nagoya University started the GEMSIS (Geospace Environment Modeling System for Integrated Studies) project in 2007. In the phase 1 (2007-2009), one of subgroups, GEMSIS-Sun, mainly promoted integrated studies based on simulation/modeling and data analysis in order to understand the acceleration/transportation/loss processes in solar flares.

In the GEMSIS phase 2 (2010 - 2015), the solar cycle 24 reaches its maximum and large solar flares are highly produced. So we defined our final goal of systematically understanding the whole processes (energy-storage, flare trigger, energy-release, and particle acceleration) in solar flares, especially in large solar flares. In order to realize it, realistic models for the specific scientific targets, e.g., flare-trigger, particle acceleration, and so forth, are developed. Then, we try to compare observational results with these models and simulations in the phase 2.

We have carried on the following research activities; (1) accurate coronal magnetic field modeling and flare-trigger simulation, (2) particle acceleration modeling in solar flares, (3) multi-wavelength data analysis for solar flare researches, (4) the Hinode flare database and the database of coronal magnetic field of the flare-productive active regions. In this presentation, we briefly report these research activities.

キーワード: 太陽フレア, 粒子加速, 磁場

Keywords: solar flare, particle acceleration, magnetic field