

**Reproduction experiment of Martian dust storm using a Mars general circulation model**

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From past satellite and the ground observations, the existence of the dust storm extending to the planet scale is confirmed. The global dust storm is not an event generated every year though those of local scale are observed every year. Two or more small scale dust storms are generated in the first stage of the dust storm generation, and the dust storm grows up to the planet scale finally. To request the condition of temporal development of the dust storm to such a planet scale, I built the supply process of dust into the model in this research and experimented.

The model used in this study consists of the dynamical process of CCSR/NIES AGCM5.4g and Martian physical process ( sublimation/radiation process of the CO<sub>2</sub> atmosphere, gravitational sedimentation of dust particle in the atmosphere, radiation process of CO<sub>2</sub> gas/dust particle, and dust lifting from ground ). The dust lifting process is a parameterization proposed by Newman et al. [2002]. In this announcement, it pays attention to the dust lifting region of the reproduction dust storm in the MGCM, and it reports on the outcome.