Development of multi-color imaging system for space planet telescope

Yukihiro Takahashi[1]; Takeshi Sakanoi[2]; Jun Yoshida[1]; Makoto Taguchi[3]; Kazuya Yoshida[4]

[1] Dept. Geophysics, Tohoku University; [2] PPARC, Grad. School of Sci., Tohoku Univ.; [3] NIPR; [4] Dept. Aeronautics and Space Eng., Tohoku Univ.

Space telescope at low earth orbit would be one of the most powerful tool in planetary science since it is not affected by the earth's atmosphere. Advantage of the telescope compared with in-situ spacecrafts is ability to monitor many subjects in a short period. In order to apply to various scientific topics relating to the Solar bodies, the multi-color imaging system with a variable mask is considered. We report the results of test observation on the ground and the performance in space conditions of the new filter device and the digital micro-mirror device and discuss the importance in scientific purpose.