Concept studies of a small-size spacecraft for the Mars exploration

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A small-size spacecraft for the Mars exploration is studied for a possible future mission in Japan, which aims to investigate seasonal and annual variations within the Martian climate system, to study short-term changes in the Martian surface and ice caps, and to study the distribution and evolution of interplanetary dust in the vicinity of Mars. Recent technologies and heritages of HAYABUSA and PLANET-C/VCO missions allow us to realize a possible dieted spacecraft with sufficient instruments like multiband scanners at visible wavelength, thermal infrared camera, and etc. These studies will open a new possible window for exploration of the planets, and will bring a break-through in the studies of planetary environment. We will present concept studies of the space-craft in this talk.