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PPS001-P02

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## Studying the Martian water cycle and atmospheric dynamics with a meteorological orbiter

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The strategy of the Japanese Martian meteorological orbiter will be presented. The science goals are (1) water cycle as a result of the interaction between the atmosphere and subsurface ice and (2) atmospheric dynamics. Global, high-resolution, continuous mapping of water vapor, cloud, dust and atmospheric temperature will be performed from high orbit for this purpose, and submillimeter sounder will be used to map water vapor, D/H ratio, winds and temperature in three-dimensions. Mapping of other minor gases and polarimetry measurements are also considered.

Keywords: Mars, atmosphere, exploration