Observation of the interstellar wind by UVS onboard NOZOMI

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The Ultraviolet Imaging Spectrometer (UVS) onboard NOZOMI consists of two sensors, a ultraviolet grating spectrometer (UVS-G) and a Lyman alpha photometer (UVS-P) with hydrogen and deuterium absorption cells. The observation of H Lyman alpha emission from the interstellar wind is a major target of UVS on the Mars transfer orbit. The distribution of the interstellar H is important information for investigating the physical processes in the solar system. We are operating UVS twice a week on the Mars transfer orbit. Each UVS observation covers about 0.4 - 1% of the whole sphere. Therefore it will be possible to make the whole spherical mapping of the interstellar H Lyman alpha emission. In this paper, we will present the initial result.

The NOZOMI satellite was launched on July 3, 1998, and was put into the Mars transfer orbit on December 20, 1998. The Mars encounter is scheduled at the end of 2003. The Ultraviolet Imaging Spectrometer (UVS) onboard NOZOMI consists of two sensors, a ultraviolet grating spectrometer (UVS-G) and a Lyman alpha photometer (UVS-P) with hydrogen and deuterium absorption cells. On the earth parking orbit, UVS observed the H Lyman alpha emission from the geocorona and the interstellar wind. The observation of H Lyman alpha emission from the interstellar wind is a major target of UVS on the Mars transfer orbit. The distribution of the interstellar H is important information for investigating the physical processes in the solar system. We are operating UVS twice a week on the Mars transfer orbit. Each UVS observation covers about 0.4 - 1% of the whole sphere. Therefore it will be possible to make the whole spherical mapping of the interstellar H Lyman alpha emission. In this paper, we will present the initial result.