

## Development of an ultraviolet spectrometer for the Mars/Phobos exploration

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The UltraViolet Spectrometer (UVS) is a strong tool for observing the Martian atmosphere and the surface of its moon, Phobos. For example, UVS can observe the absorption of the ozone (~250 nm) in the Martian atmosphere. Ozone is a key species for understanding the stability and evolution of the Martian atmosphere. UVS can also observe the surface albedo of Phobos at the wavelength of 220 nm interpreted of polycyclic aromatic hydrocarbon (PAH) origin. The presence or absence of PAH is important to understand the origin and evolution of Phobos. In this presentation, we will show the optical design of UVS and the methods of measurements of the global distribution of total ozone on Mars and the surface composition of Phobos.

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