

## Space telescope for planet observation onboard a small satellite

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Space telescope is a powerful tool in investigating planets in the solar system, which can monitor all the planets and satellites in a short period. Data taken by ground-based telescopes, a planet orbiter and the space telescope are complementary to each other. Ideas and concepts of the planetary space telescope using a small earth-orbiting satellite are discussed in this presentation. We suggest to make use of some latest optical technology, including digital micro-mirror device (DMD), charge injection device (CID) and new type vane system, which enable us to detect a faint optical emissions without serious contamination from the sunlight scattering from the dayside of the planets or the sun itself. The space telescope provides unique and successive data, such as aurora, exospheric and escaping atmosphere, cloud structure, lightning occurring on/around planets and satellites.