

Ground-based telescope observation of Jupiter's polar haze

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It is known that Jupiter's polar areas have haze which consists of aerosol particles and gas over which the sun-light is scattered. Haze is located in the layer higher than the cloud top so that the scattered light at the deep methane absorption line of 889 nm is much brighter than non-haze area. Horizontal haze structure is seldom investigated.

In this study, imaging observation of Jupiter's polar haze used ground-based 1.6 m reflector named Pirka telescope operated by Hokkaido University. In order to investigate the temporal variation of the structure of the polar haze, image slices of the Jupiter at 889 nm at latitude of 67 degree, the low latitude edge of the polar haze region, are made for the data obtained in the period of 14:00 - 19:00 UT on 29 October 2011 and 10:30 - 15:00 UT on 31 October 2011. It is found that the polar haze has undulating pattern at the low latitude edge of polar haze like as Cassini observation in 2000, but the specific structures are different.

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