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Haze and cloud microphysics in the atmosphere of Pluto

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The occultation of a distant star by Pluto have revealed for the first time the existence of a chromatic effect in the transmission through the atmosphere (Elliott et al., 2003). This was interpreted as the proof of an extinction layer due to haze particles of about 0.2 micrometer. In this work we use a microphysical model of haze and clouds. We show that the size of particles and the level of tangential opacities observed during the occultation is not likely to be produced by photochemical aerosols, as on Titan. On the other hand, we rather find that clouds droplets could be produced in Pluto atmosphere, and would have the required properties to explain the observation