



A physical model of an active area on the cometary nucleus. The case of comet P/Wild-2.

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The temperature and sublimation regime of an active region on the comet P/Wild-2 nucleus is considered. The properties of the region as a conical hole in dust layer are calculated in the present paper. All the calculations are carried out for the case, when the season effects are distinctly expressed. The temperature and amplification factor are defined from the geometrical parameters of the active region separately for ice bottom and dust walls. The temperature of the ice bottom practically is not changed over the whole period of rotation, it is approximately constant due to heating by the reradiated energy from the dust walls heated by the Sun. The obtained results show that the conical form of crater structure on the surface of the comet P/Wild-2 intensified sublimation by a factor ≤ 3 .