

Water-ice in the polar region on Mercury

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The high radar reflectivity observed at the pole of Mercury has suggested the presence of water-ice in the permanently shadowed floors of the polar craters. In this paper, we will review briefly how temperature distribution in the permanently shadowed regions of the polar craters on Mercury is determined. In addition, we will discuss the origin of water-ice. In particular, impact cratering of comet on Mercury surface is considered as the origin of water-ice, and amount of water-ice is discussed.