A New Story for Saturn Satellite Dione's History seen in Crater Counting

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The rotation and revolution period of Saturn’s satellite Dione are synchronized. In this case, we assume (Area with many craters) = (Area where meteorite is likely to hit).

Meteorites are generally likely to hit the leading hemisphere of the satellite (Hirata 2016), however, from the whole image of Dione, the crater distribution on the trailing hemisphere seems to be more concentrated than on the leading hemisphere. We tried to make a new explanation for the surface history of Dione with our detailed crater counting.

Keywords: crater counting, icy satellite