Map of highest surface temperature in the north polar region of Mercury superimposed on topography measured by the MESSENGER spacecraft. Red areas surrounding the pole (center) reach temperatures above 450 K. Blue and purple areas inside polar impact craters never exceed 100 K and are sufficiently cold to harbor water ice and frozen organic compounds. The largest ice-containing crater near the center of the image is ~112 km in diameter and 2.7 km deep. See pages 282, 292, 296, and 300. For the story behind the cover, go to http://scim.ag/cov6117.

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