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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SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005. Periodicals Mail postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 2013 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (15 issues): $149 ($74 allocated to subscription). Domestic institutional subscription (15 issues): $990; Foreign postage extra: Mexico, Caribbean (surface mail) $55; other countries (air assist delivery) $85. First class, airmail, student, and emeritus rates on request. Canadian rates with GST available upon request, GST #1254 88122. Publications Mail Agreement Number 40015468. Periodicals postage paid at Washington, DC, and at additional mailing offices.

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Published by AAAS
www.sciencemag.org

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