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Nomarski interference-contrast micrograph of an aluminum-silicate mixture of stoichiometric mullite composition showing peritectic microstructure formed by slow cooling of a homogenized melt. Interpretation of such microstructures with the aid of diffusion couple technique results in a new SiO$_2$-Al$_2$O$_3$ phase diagram (about $\times$1200). See page 69. [Iihan A. Ak-say and Joseph A. Pask, Department of Materials Science and Engineering and Inorganic Materials Research Division, Lawrence Berkeley Laboratory, University of California, Berkeley]
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Jupiter’s red spot and a shadow of the moon (plus Jupiter’s cloud structure) taken at 11:02 p.m. on 1 December as NASA’s Pioneer 10 spacecraft was about 2.5 million kilometers from the planet. Images are made on tapes, flown into Tucson daily; and processed in black and white after being rectified and interpolated at the University of Arizona. See page 301. [National Aeronautics and Space Administration, Washington, D.C.]
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Young peregrine falcons in an eyrie in Vermont in 1939. Declines in North America and Europe have been linked to the use of DDT and this species no longer breeds in the eastern United States. See page 673. [Walter R. Spofford, Ornithology Laboratory, Cornell University]