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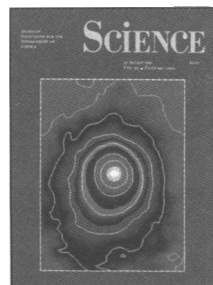
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**COVER** This image of the enormous hydrogen coma surrounding Comet Halley was obtained by the Pioneer Venus Orbiter over a 5-day period in early February 1986. The image was constructed from over 9000 data points that were obtained as the spin axis of the rotating spacecraft was held fixed and the comet drifted across the instrument field of view. The false-color image, embellished by white constant-brightness contours, shows the Lyman- $\alpha$  brightness distribution at 1216 angstroms. The spacecraft is now headed toward a fiery death in the upper atmosphere of Venus in the fall of 1992. See page 1008. [Image processing by A. I. F. Stewart and M. R. Combi]

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