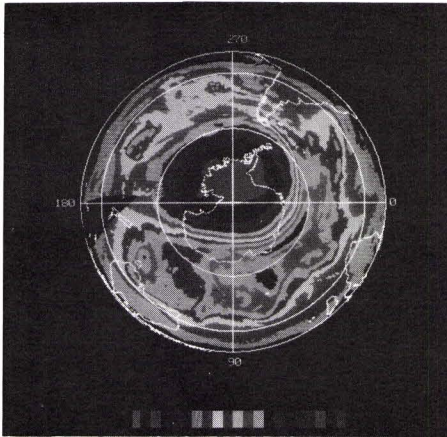


# PE&RS

Photogrammetric Engineering

Remote Sensing



COVER PHOTO—Ozone Hole over the Antarctic. In this false color image of total atmospheric ozone over the Southern Hemisphere on October 24, 1986, the violet region near the South Pole is at the center of a distinct oval of extremely low ozone values. This region, covering almost all of Antarctica, is surrounded by a split ring of high ozone. Total ozone is measured in Dobson units (DU), equivalent to 1/1000 atm-cm; the thickness of a layer of pure ozone at NTP conditions. The color scale displays extremely low values on this day (175-200 DU) in violet and black. Blue colors represent typical subtropical amounts of 250-350 DU and the highest total ozone regions (450 DU) are shown as dark brown.

The data for this image were obtained from the Nimbus 7 Total Ozone Mapping Spectrometer (TOMS) instrument which determines ozone by measuring the albedo of the atmosphere at six ultraviolet wavelength bands between 312.5 and 380.0 nm in the edge of the Huggins absorption band. Swaths that are 2800 km wide are scanned with 50 km resolution as the spacecraft moves in a polar orbit. These swaths are merged to produce hemispheric maps of ozone each day since launch in 1978. A missing swath is illustrated by the black wedge at the left border of the figure. The image was produced with a Jupiter 7 graphics terminal and photographed with a Dunn 631 camera.

Image submitted by Arlin J. Krueger, NASA Goddard Space Flight Center, Greenbelt, Md., with the assistance of Scott Doiron and Reginald Galimore, Science Applications Research, Lanham, Md.

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