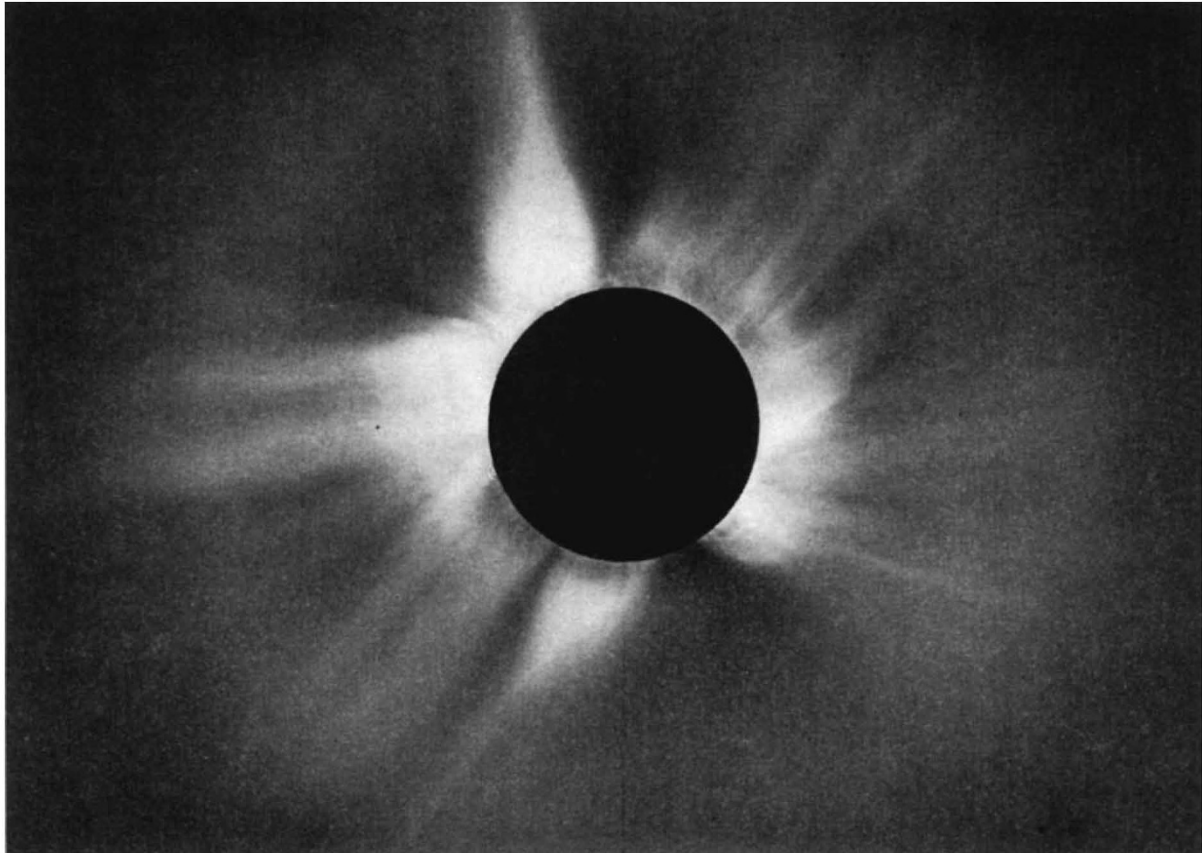


understanding of the solar corona. But the eclipse was not a carnival for astronomers only. On the eclipse day a research vessel from the Texas A & M University was out in the Gulf of Mexico to see how plankton reacted to the eclipse, if at all (see page 1155).

In an account of the North American eclipse of August 7, 1869, in the first issue of *Nature*, Lockyer said that the line of totality was almost one continuous observatory from the Pacific to the Atlantic, and something like that happened again in March. On this basis it can already be

said that the observations on March 7 were a success, despite the parsimony that prevented the experiments from being as ambitious as might have been anticipated. One might have expected more advantage to be taken of the enormous good fortune of the rocket facilities at Wallops Island being close to the path of totality, for example, and it is a pity that there was insufficient money to make a supersonic observatory out of the aircraft that was to have chased the Moon's shadow and given more than an hour's worth of continuous totality.

The Corona during the March 7, 1970, Eclipse



THE photograph shows the solar corona observed about thirty seconds after second contact at the "High Point" camp (16° 20' N, 6 h 25.0 m, altitude 8,800 feet) about thirty miles south-west of San Carlos, Yautepec, Mexico, by the eclipse expedition of the High Altitude Observatory of the National Center for Atmospheric Research*. The exposure was through a radially symmetric, neutral density filter in the focal plane to compensate for the steep decline of coronal radiance with increasing distance. This allows structural features to be traced from the chromosphere out to 4.5 solar radii on the original negative.

The long dimension of the frame is east-west (geocentric) and the bright helmet streamer with a prominence at its base is in the north-east (geocentric) at a heliocentric position angle of about 50°. Other bright helmet streamers appear at heliocentric positions 98°, 159°, 194° and 250°. The bright "horn" at 292° on the west limb appears on the original negatives to be due to the superposition on the line-of-sight of two fainter streamers. The corona at this time was unusual for the presence of streamers at high latitudes and the development of straight rays over the poles. The circumstances at the time of this eclipse were unusual for the rather dark sky. Long exposure photographs, made without the radially graded filter, show the lunar maria and suggest that the sky radiance did not exceed $3 \times 10^{-10} B_{\odot}$. Table 1 lists the technical data for the photograph.

Table 1. TECHNICAL DATA

Objective aperture	11.1 cm	Effective wavelength	6400 Å
Focal length	178 cm	Exposure	10 seconds
Focal ratio	f/15	Radial filter range	10 ⁴ in transmission
Film	Kodak Linagraph Shellburst (70 mm)		

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