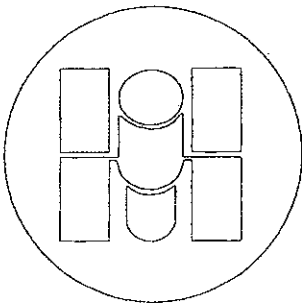


The Hubble Space Telescope Optical Systems Failure Report



November 1990

NASA

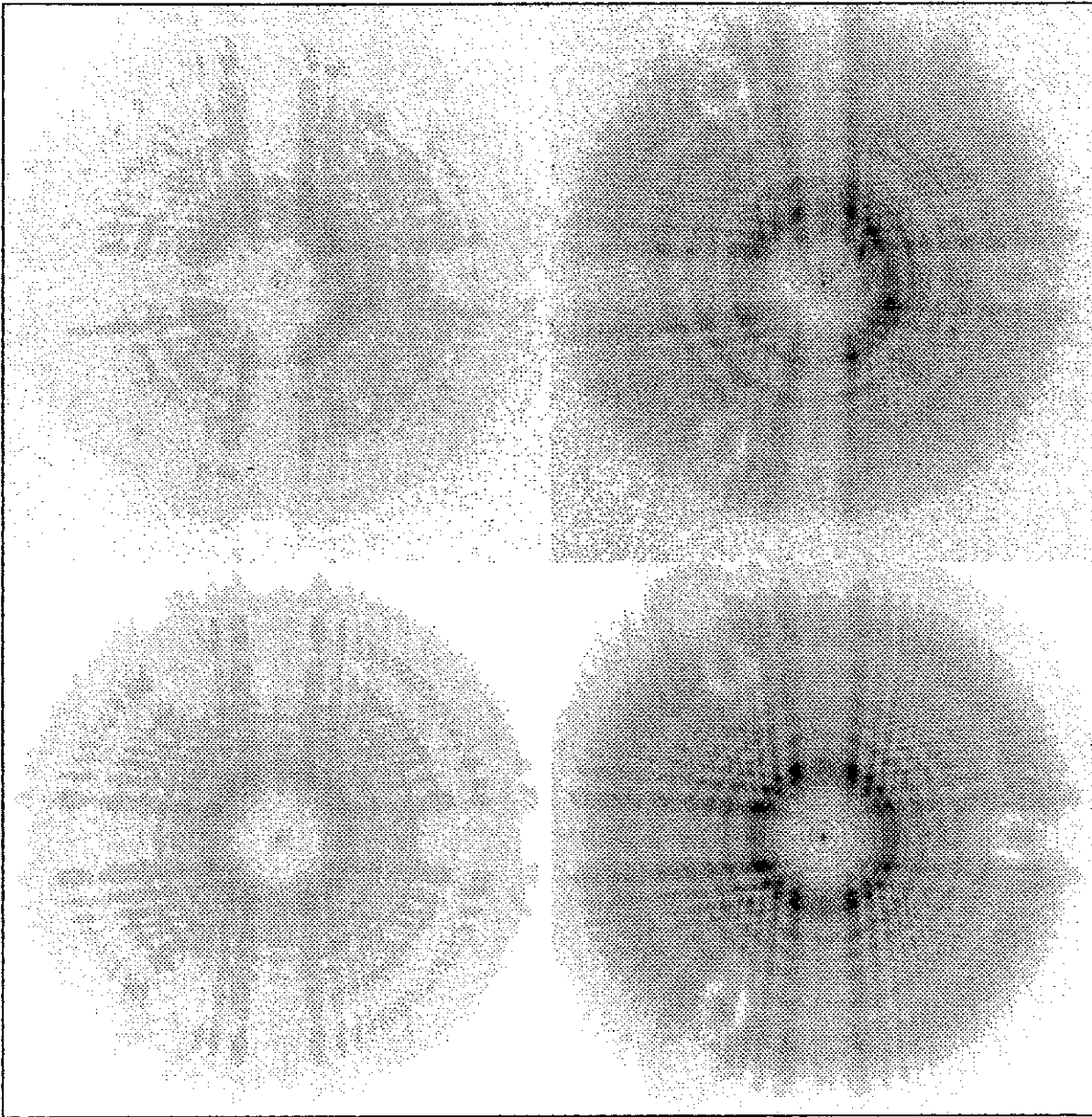
National Aeronautics and
Space Administration

(NASA-TM-103443) THE HUBBLE SPACE TELESCOPE
OPTICAL SYSTEMS FAILURE REPORT (NASA)
107 p CSCL 03A

N91-12437

Unclass
G3/89 0318179

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH



(b) Recorded image of the PC5 star taken on June 21, 1990, with a $-300\text{-}\mu\text{m}$ inside focus.

Figure 6-1 (continued). The images in both (a) and (b) show a linear-intensity display on the left, and a logarithmic ("stretched") image display on the right. The focal position denotes the position of the secondary mirror. (Data were supplied by Dr. Jon Holtzman.)

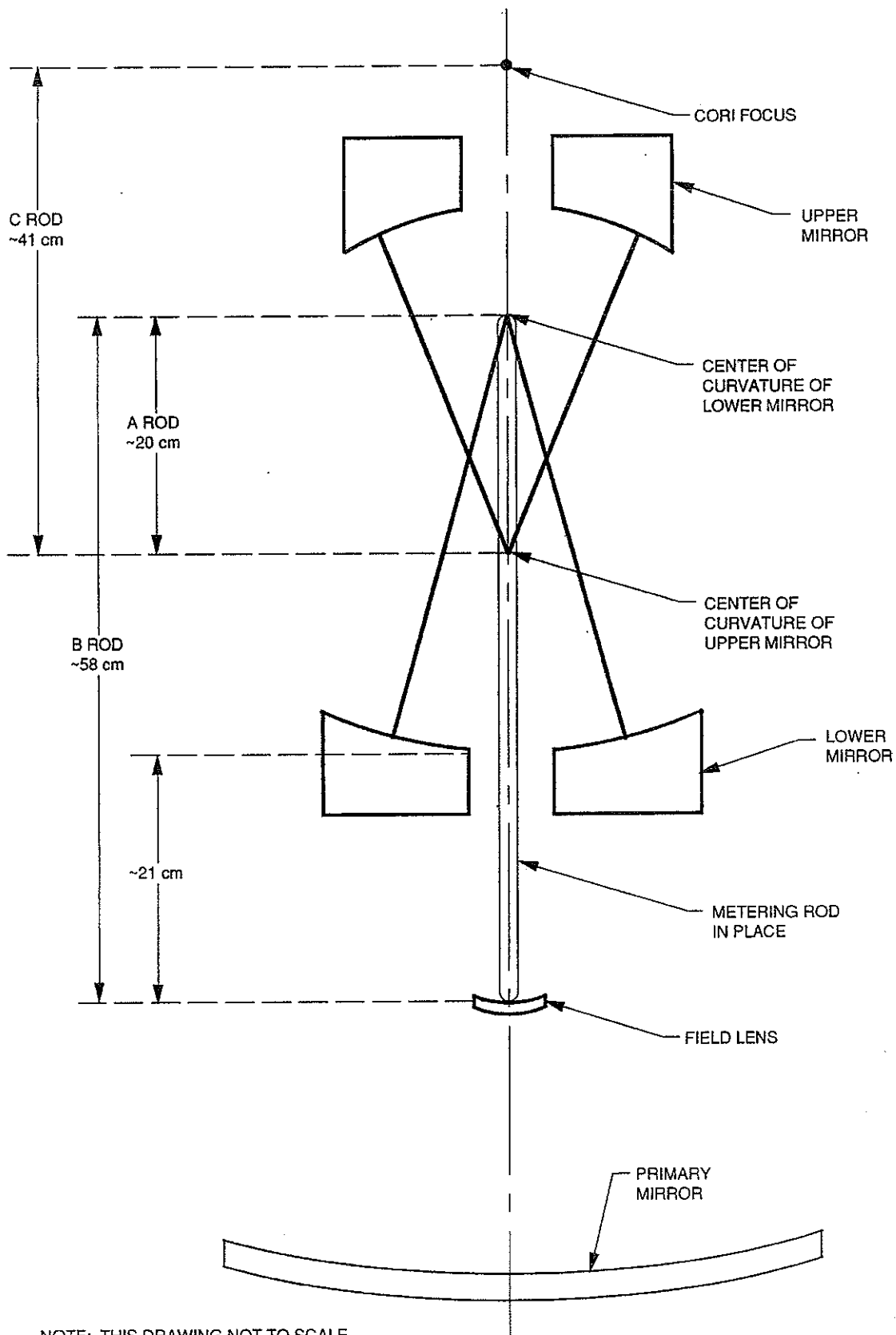


Figure 7-1. Position of metering rods used to space optical elements in the reflective null corrector.

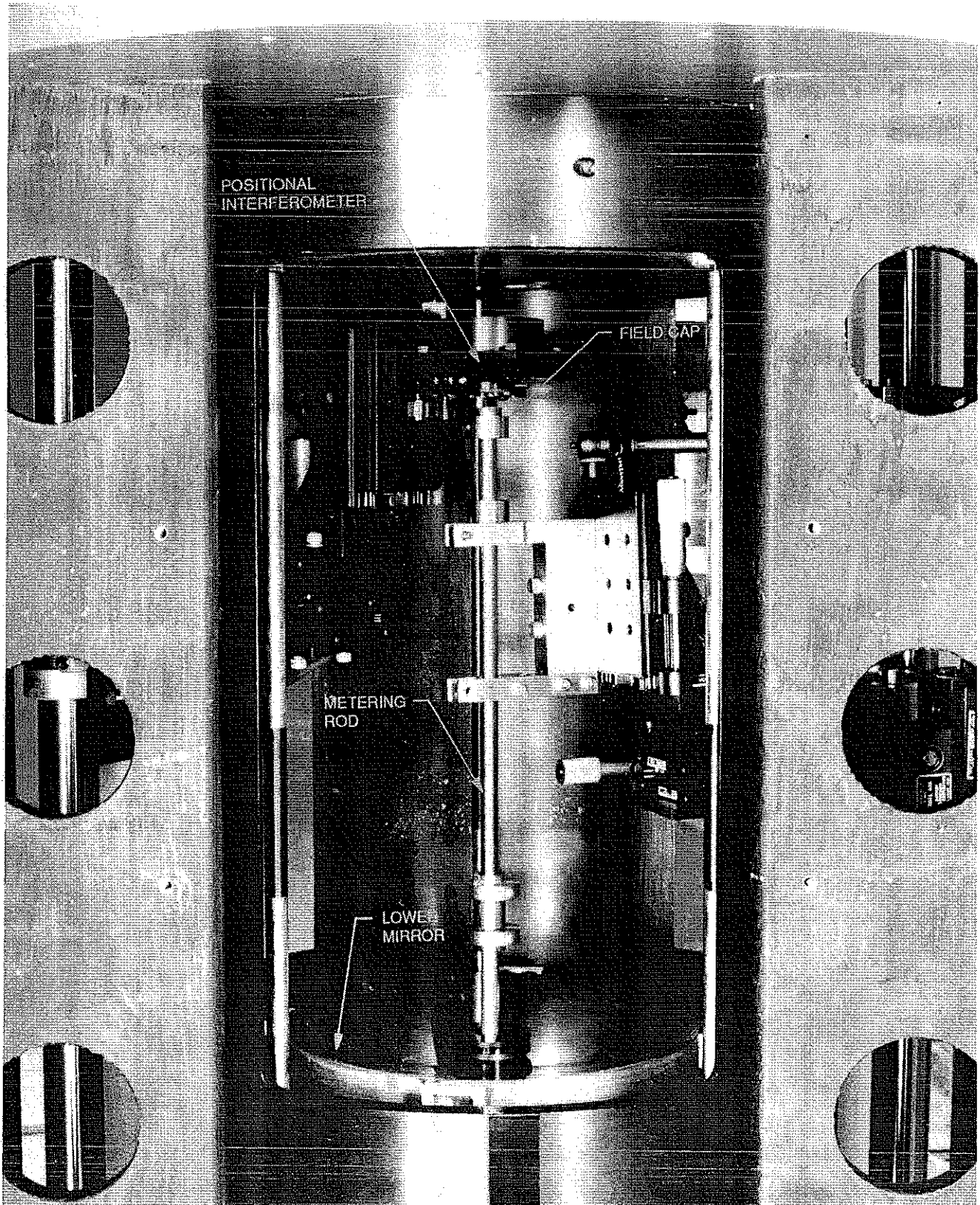
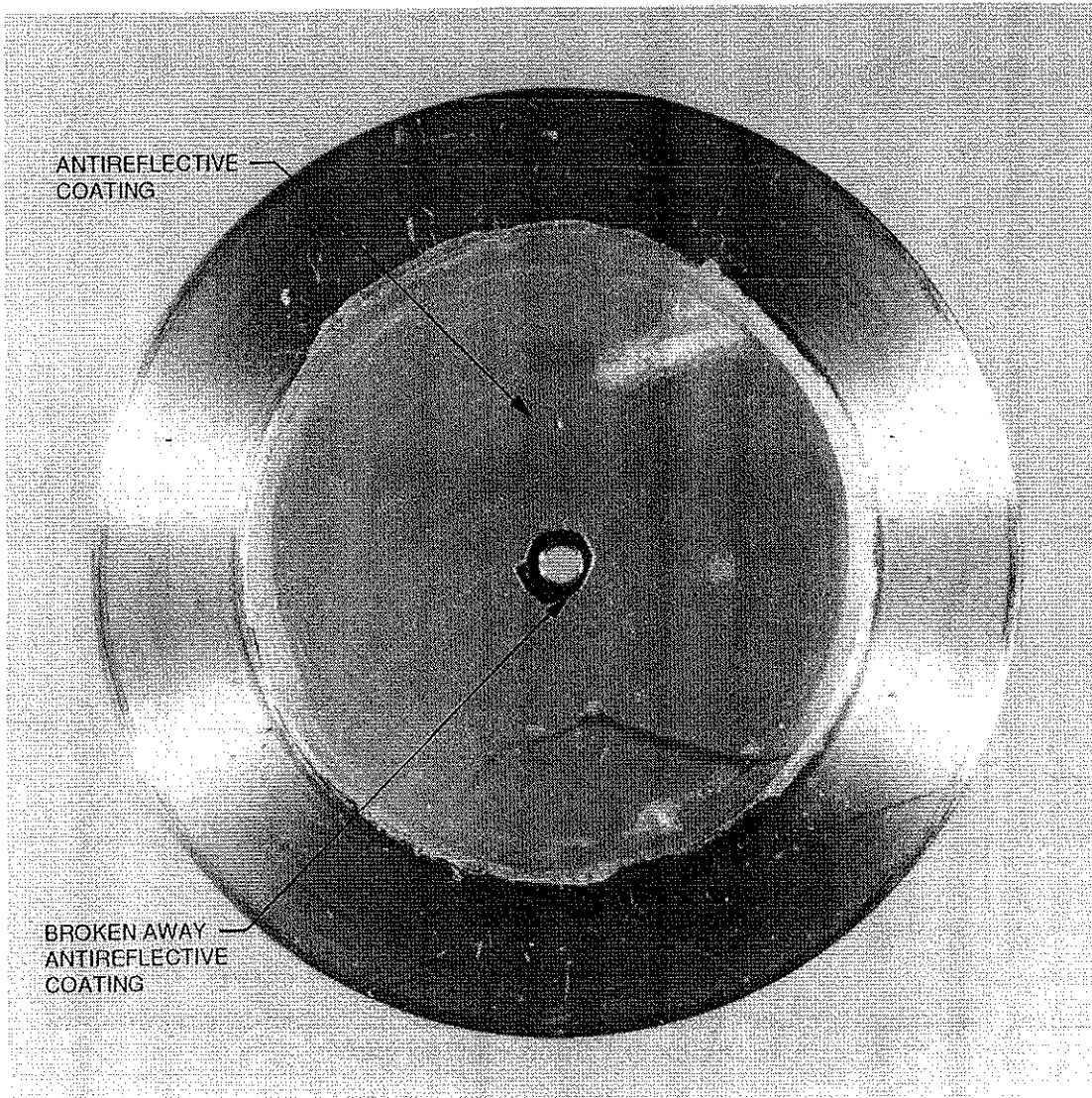


Figure 7-3. Metering rod in position between the field lens and the center of curvature of the lower mirror in the reflective null corrector.

7-4



ANTIREFLECTIVE
COATING

BROKEN AWAY
ANTIREFLECTIVE
COATING

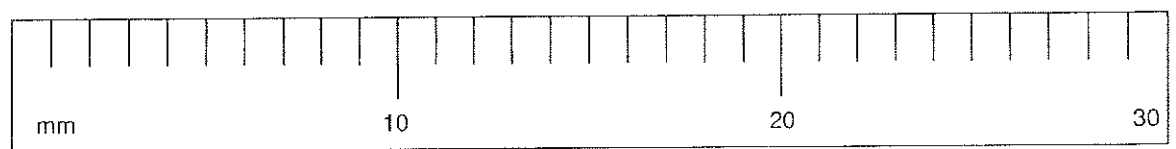


Figure 7-5. Top view of the field cap, showing the aperture and the area where the antireflective coating had broken away.

ORIGINAL PAGE
COLOR PHOTOGRAPH

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH



Figure D-1. RNC interferogram of the primary mirror, taken in February 1982.

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH



Figure D-2. RvNC interferogram of the primary mirror, taken in May 1981.

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

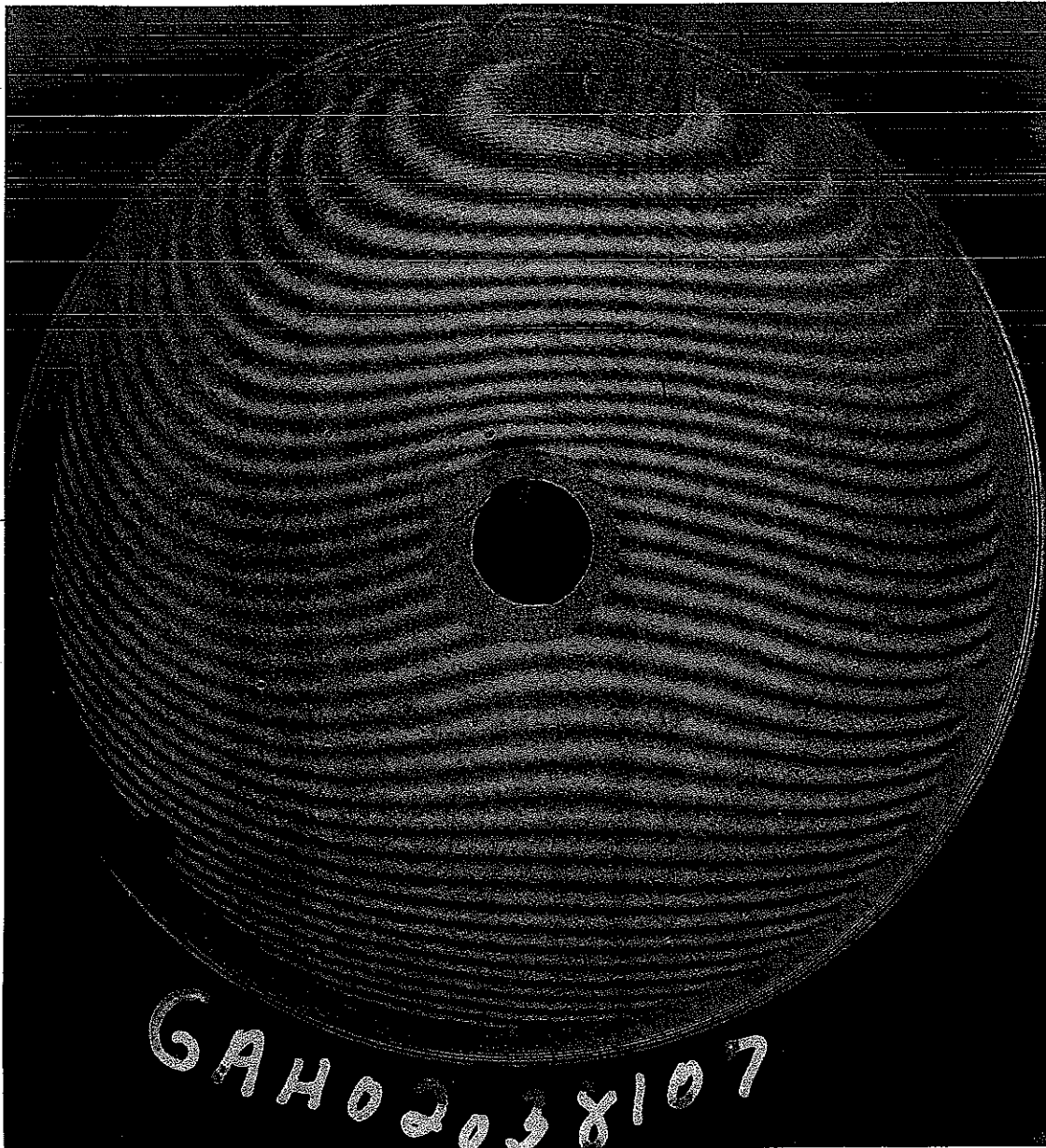


Figure D-3. INC interferogram of the reflective null corrector, taken in February 1981.