

Technical Data Sheets

Holey Carbon Film

#80010

How to Use

This calibration specimen is a pure carbon film, which contains holes of widely varying sizes across the entire grid.

The holes have clean edges and show clearly defined Fresnel fringes when the objective lens is slightly under-focused (a white fringe) or over-focused (a black fringe). By observing the symmetry of the fringes while the objective lens is adjusted from under-focus to over-focus, the degree of astigmatism present can be determined. The astigmatism can then be corrected by adjusting the direction and strength of the objective lens stigmator.

With a correctly adjusted lens, the black over-focused fringe will appear in its entirety around the inside edge of a hole as the objective lens is adjusted from under-focus to over-focus. The fringe will be of a constant width.

With an uncorrected objective lens, the black fringe appears at two opposite parts of the circumference of a hole first, then as the objective lens is further over-focused, the remaining parts of the hole show a black fringe. However the fringe is not of constant width.