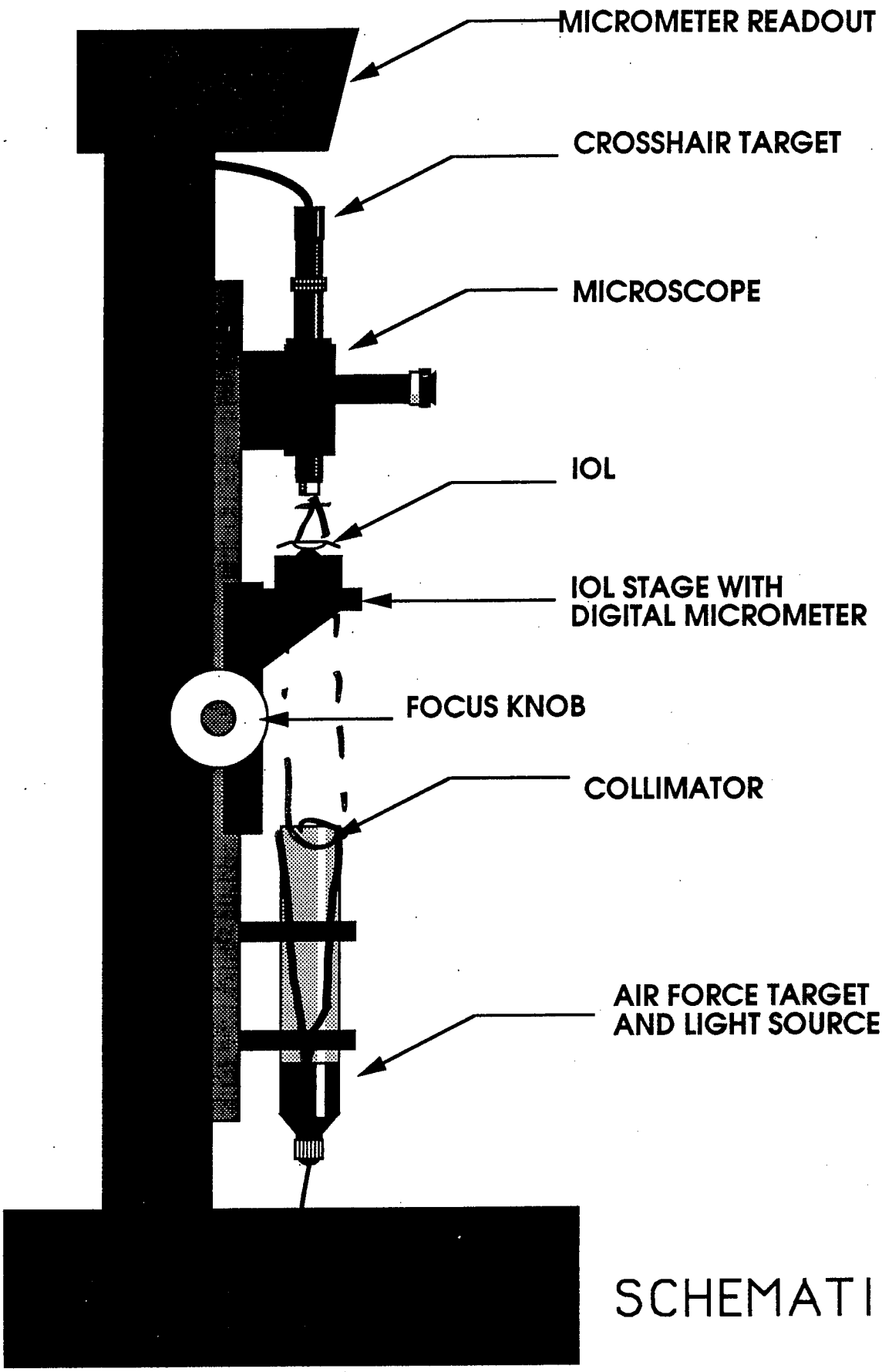
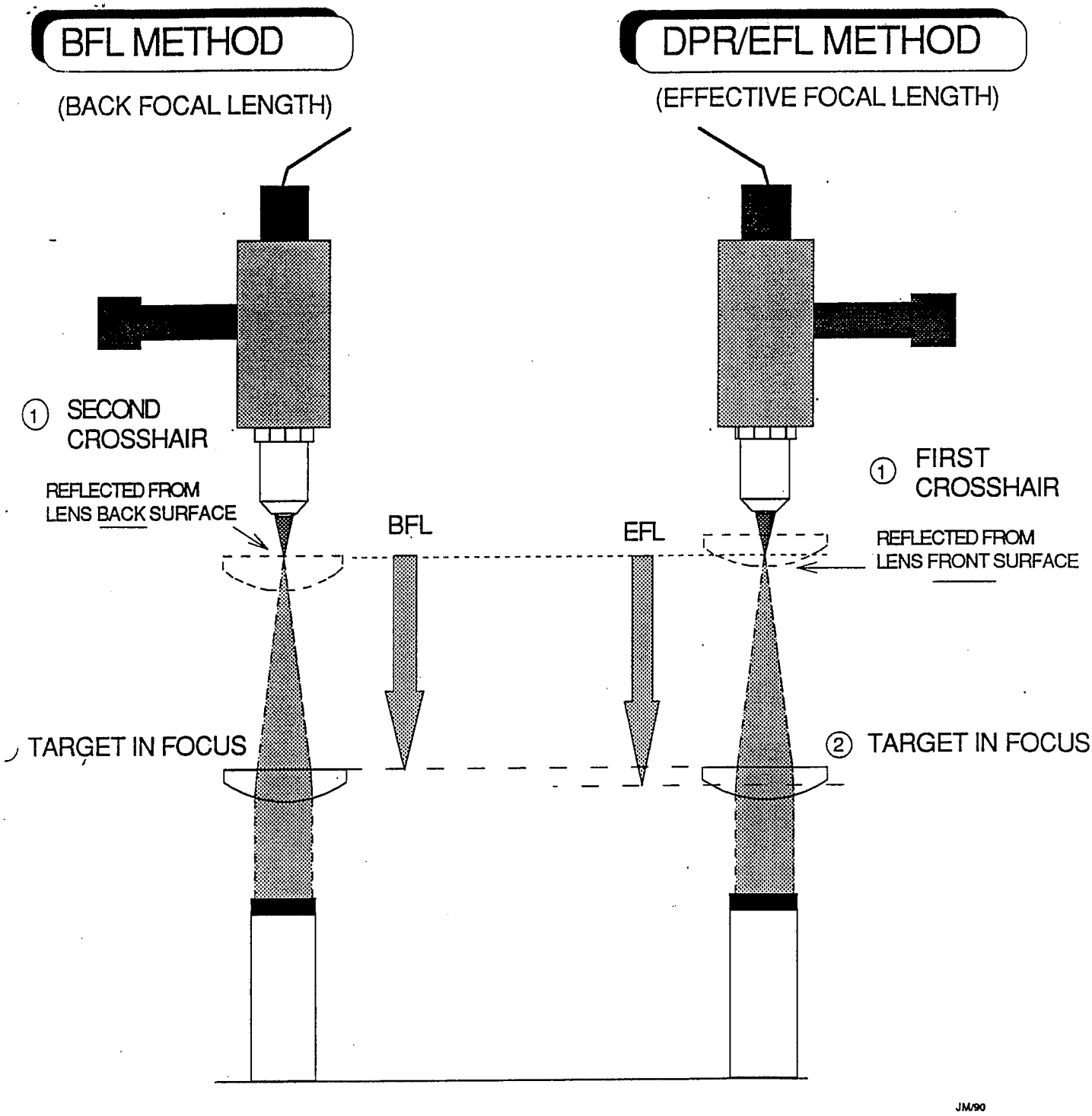
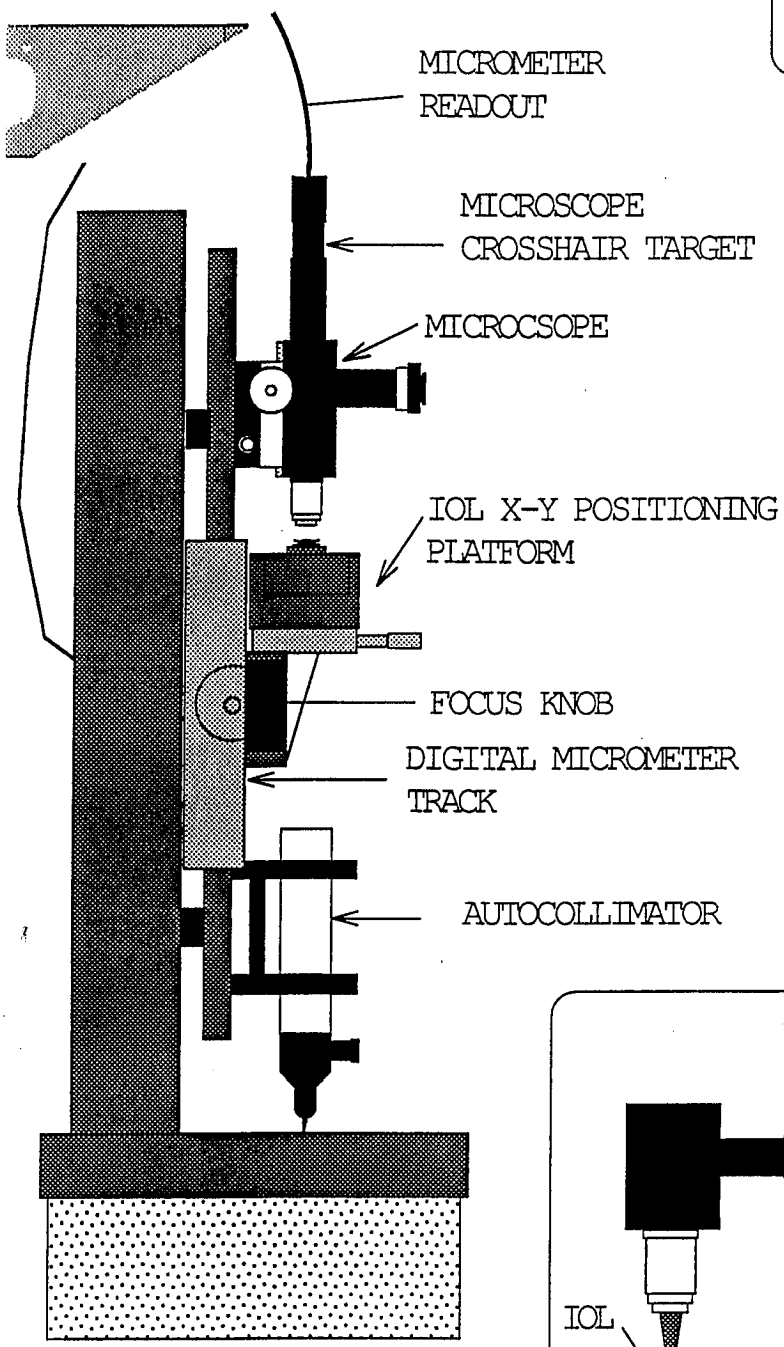
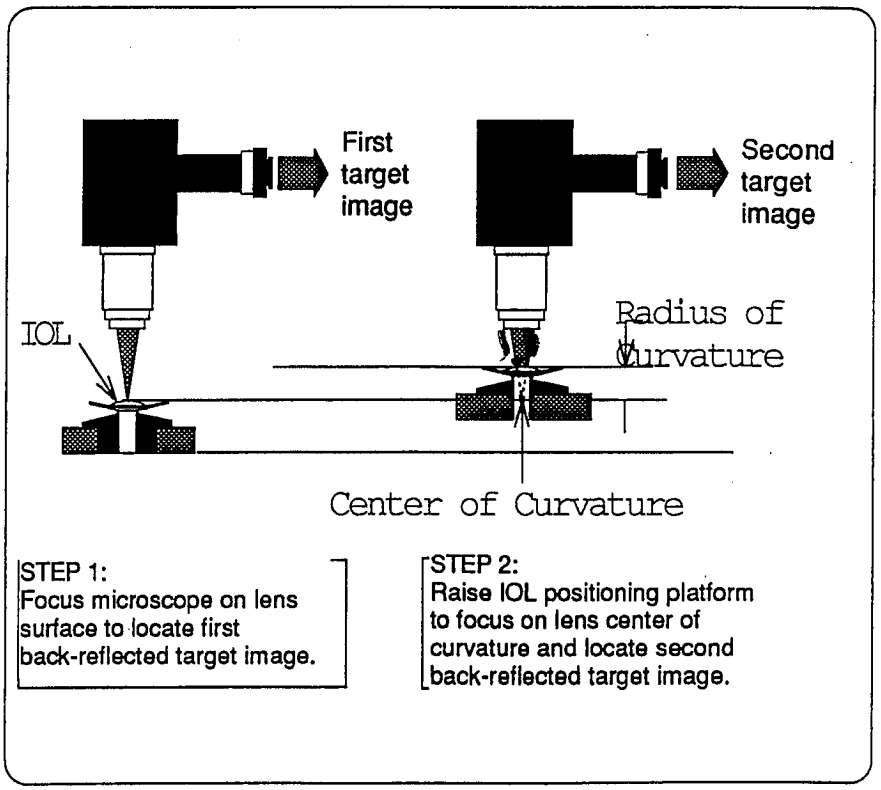

MICROMETER READOUT
CROSSHAIR TARGET
MICROSCOPE
IOL
IOL STAGE WITH
DIGITAL MICROMETER
FOCUS KNOB
COLLIMATOR
AIR FORCE TARGET
AND LIGHT SOURCE

SCHEMATIC


BFL METHOD
(BACK FOCAL LENGTH)
DPR/EFL METHOD
(EFFECTIVE FOCAL LENGTH)
① SECOND CROSSHAIR
REFLECTED FROM LENS BACK SURFACE
BFL
EFL
① FIRST CROSSHAIR
REFLECTED FROM LENS FRONT SURFACE
TARGET IN FOCUS
② TARGET IN FOCUS
JM/90

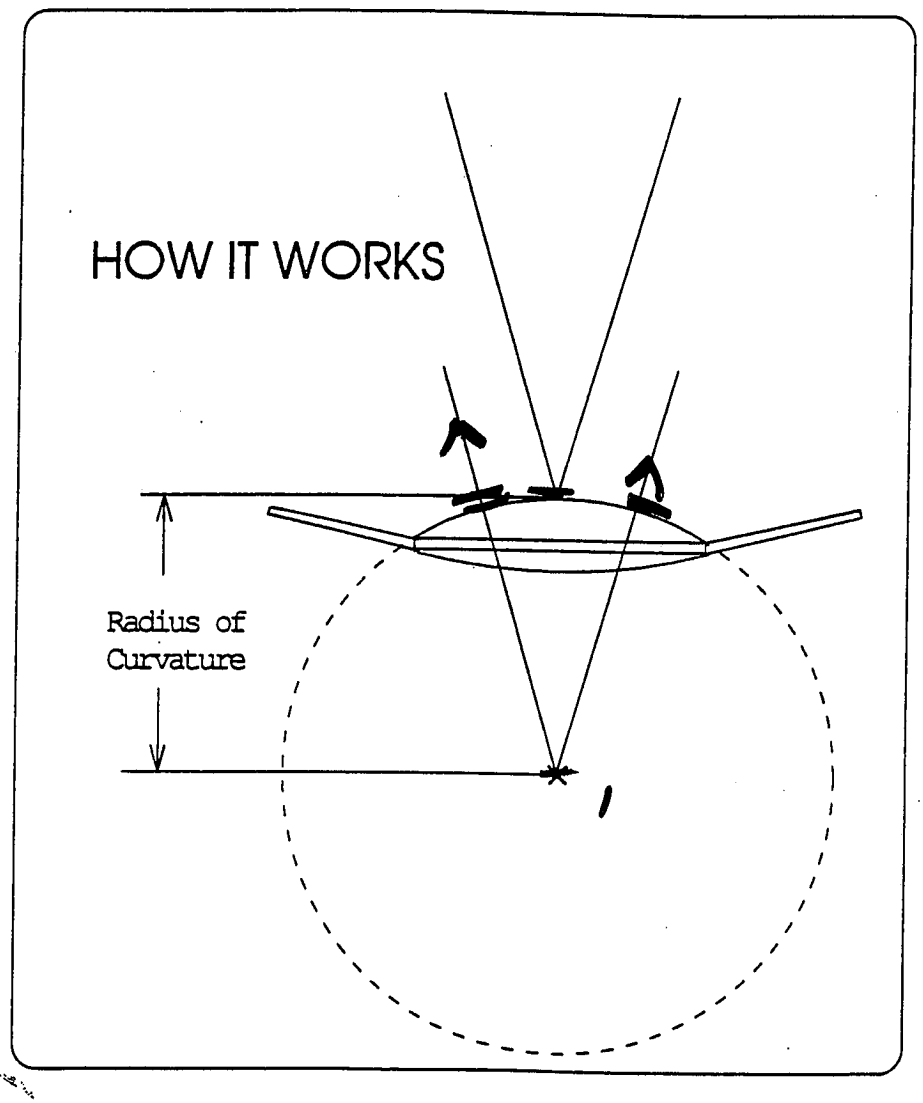
RADIUS OF CURVATURE ON BFL BENCH



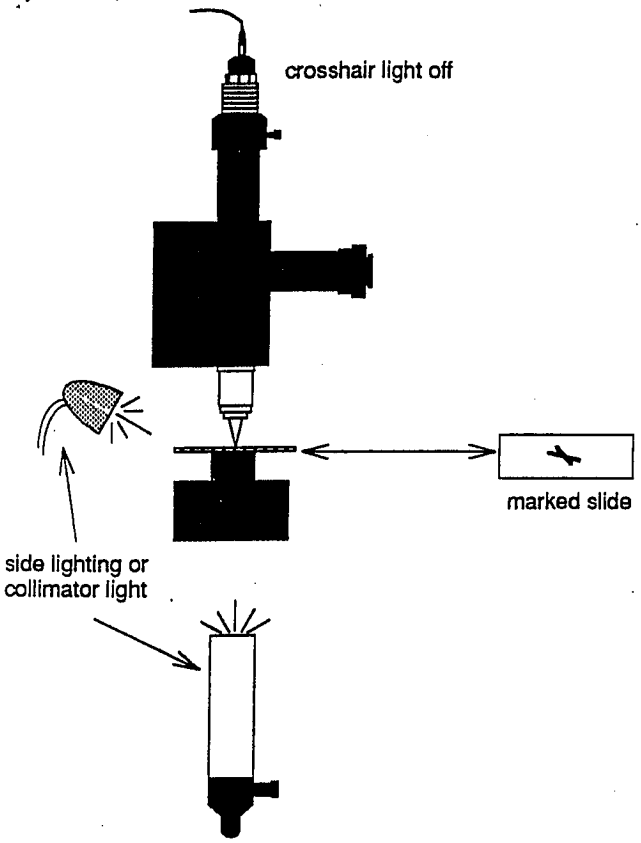


STEP 1:
Focus microscope on lens surface to locate first back-reflected target image.

STEP 2:
Raise IOL positioning platform to focus on lens center of curvature and locate second back-reflected target image.

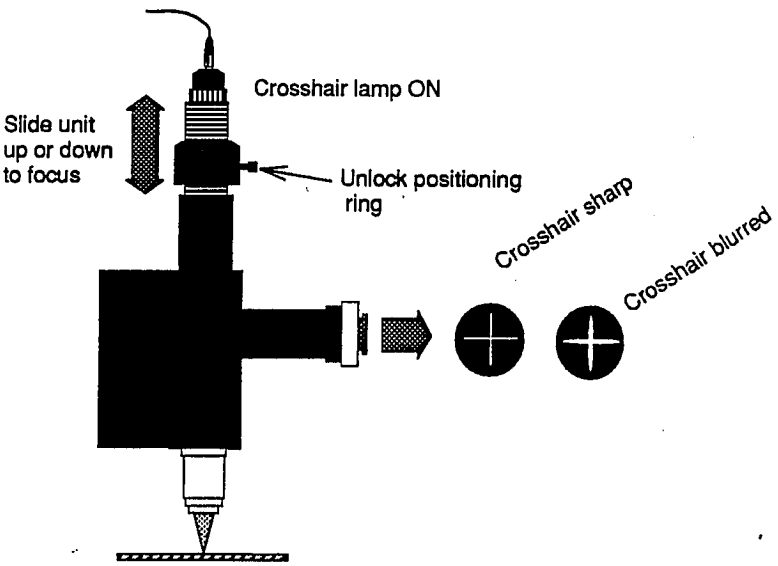

HOW IT WORKS
Radius of
Curvature

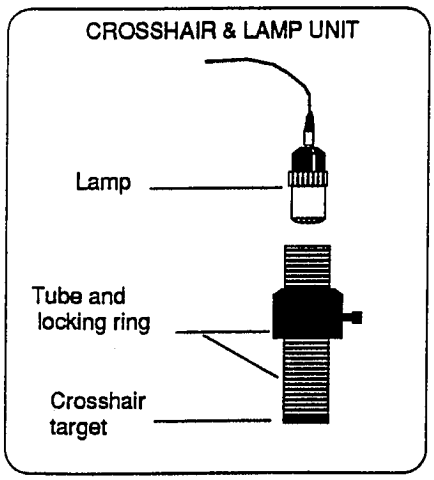
ADJUSTING CROSSHAIR FOCUS



1. Focus microscope on marked glass slide, etc. Use side lighting or lower collimator for illumination. Bring surface markings, dust ,etc. into sharp focus.

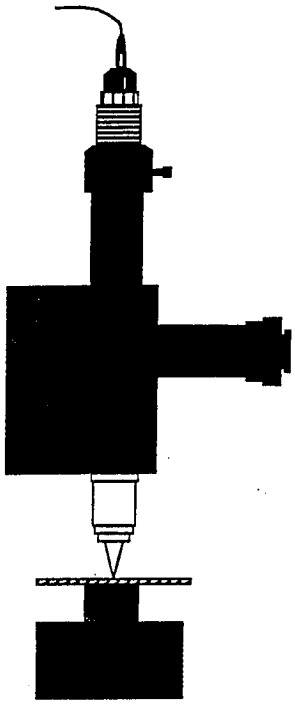
2. Do not touch focus knob. Switch on crosshair lamp and turn off other illumination. Unlock crosshair focusing ring and adjust position of crosshair and lamp unit to bring crosshair image into sharp focus. Move positioning ring to new setting.

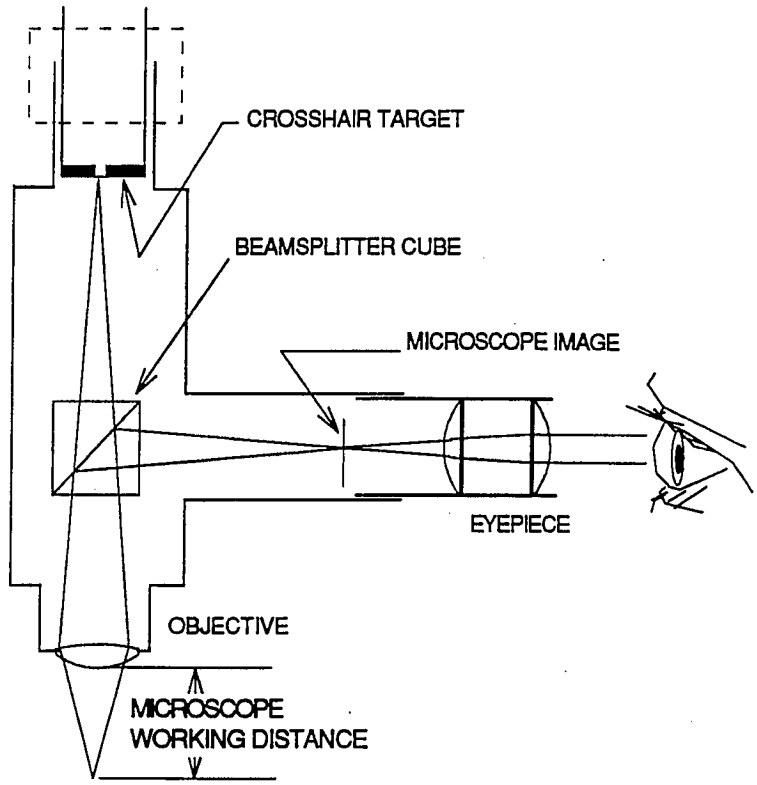


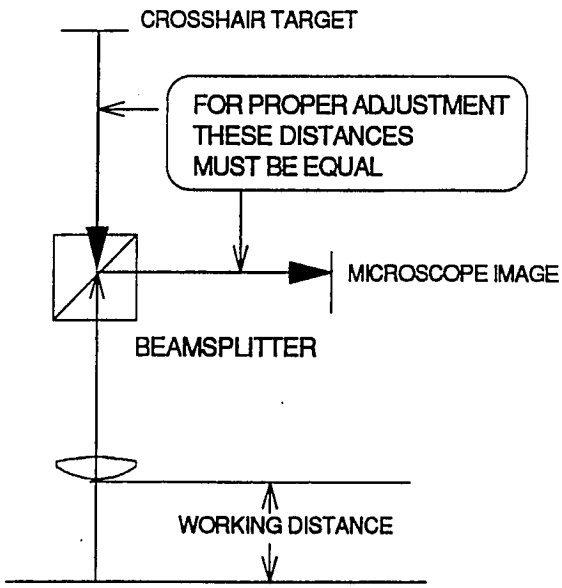


3. Recheck adjustment by switching from crosshair lamp to collimator to make sure that both surface of slide and crosshair images are in sharp focus. Lock positioning ring in place.

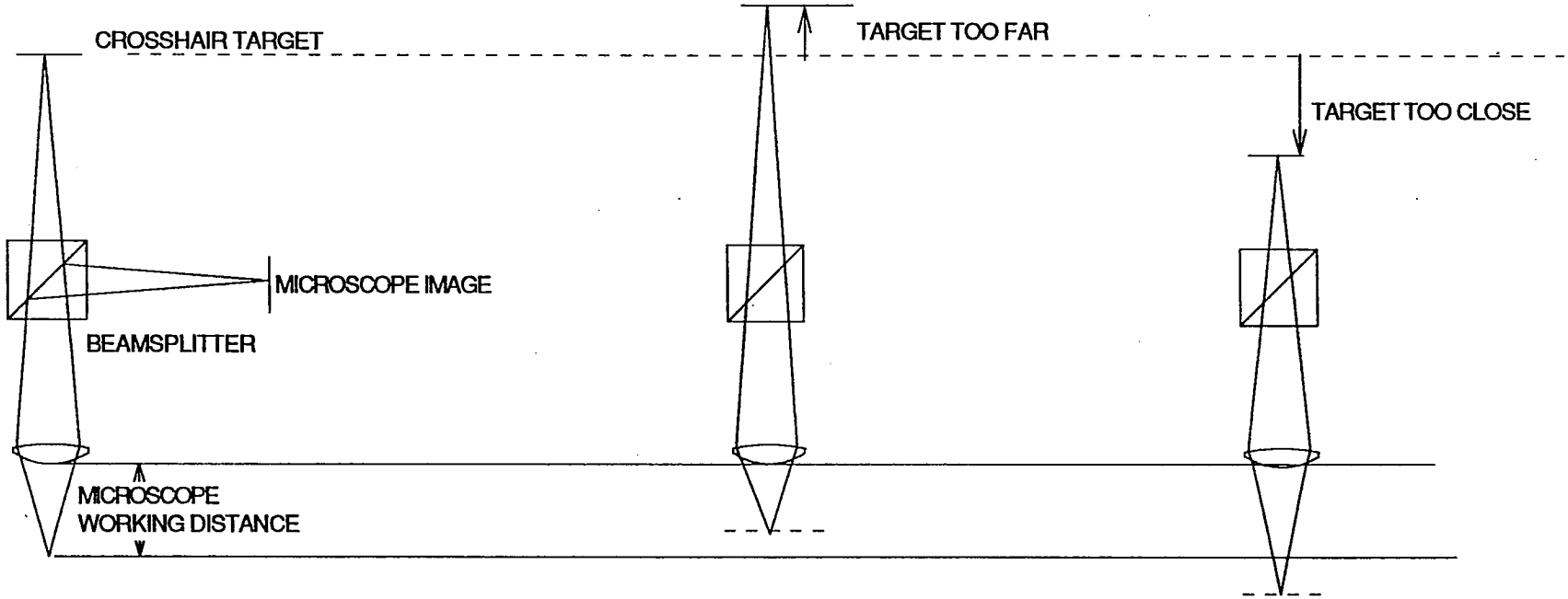
OPTICAL PATH DIAGRAM







EFFECT OF IMPROPER CROSSHAIR POSITION



PROPER ADJUSTMENT:

PROJECTED CROSSHAIR IMAGE
FORMS AT MICROSCOPE FOCUS.

LENS AND CROSSHAIR ARE
IN SHARP FOCUS AT SAME TIME

TARGET TOO FAR:

CROSSHAIR IMAGE FORMS
TOO CLOSE TO OBJECTIVE,

BFL TOO LARGE.

TARGET TOO CLOSE

CROSSHAIR IMAGE FORMS
BEYOND MICROSCOPE FOCUS

BFL TOO SMALL