

ca 719293

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC20 /30
LENS TYPE : 21/4 NAGA-F
LENS NO. : 7192

CALIBRATION DATE : 06.04.93

LEICA HEERBRUGG LTD

The Leica logo is written in a stylized, cursive script. To the right of the logo, the word 'Leica' is printed in a smaller, sans-serif font, oriented vertically.

Leica Heerbrugg Ltd
CH-9435 Heerbrugg

Calibration Department
Supervisor



CAMERA CALIBRATION

CAMERA: RC20 LENS: 2 1/4 NAGA-F NO.: 7192 CALIBRATION DATE: 06.04.9

APERTURE : F / 4.0
 FILTER ON GONIOMETER : 450 NM
 FILTER ON CAMERA : --
 PRINCIPAL DISTANCE FOR FOCUSSING DISTANCE 900 M : 213.72 MM

RADIAL DISTORTION (MICROMETERS)

 REFERRED TO PRINCIPAL POINT OF SYMMETRY (PPS)
 (POSITIVE VALUES DENOTE IMAGE DISPLACEMENT AWAY FROM CENTER)

RADIUS MM	SEMI - DIAGONALS				MEAN
	1	3	2	4	
10	1.0	1.0	0.9	0.9	0.9
20	1.8	1.4	1.9	1.3	1.6
30	2.4	2.9	3.0	2.4	2.6
40	3.4	4.5	3.9	4.1	3.9
50	3.6	4.2	3.9	4.2	3.9
60	1.9	3.6	3.4	3.1	3.0
70	0.7	2.1	1.1	1.9	1.4
80	-1.2	1.2	-0.7	0.7	0.0
90	-1.4	-0.2	-1.6	-0.7	-0.9
100	-3.1	-1.3	-2.3	-1.5	-2.0
110	-2.6	-2.6	-1.9	-2.3	-2.4
120	-1.7	-3.1	-2.3	-2.6	-2.4
130	-0.6	-2.7	-0.6	-1.7	-1.4
140	-0.4	-0.8	0.4	-0.1	-0.2
148	0.3	0.1	1.1	1.4	0.7

PHOTOGRAPHIC RESOLUTION (LINE PAIRS PER MILLIMETER)

 INTERNATIONAL 3-LINE TEST-CHART, CONTRAST (LOG) : 2.0
 APERTURE : 4.0
 FILTER : 450 NM
 FILM : KODAK TECHNICAL PAN 2415
 DEVELOPER : KODAK HC110

ANGLE: (DEGREES)	0	5	10	15	20	25	30	35
RAD.	95	84	83	73	63	38	46	62
TANG.	95	94	73	89	67	55	64	57

AWAR (AREA WEIGHTED AVERAGE RESOLUTION) IN LP/MM : 62



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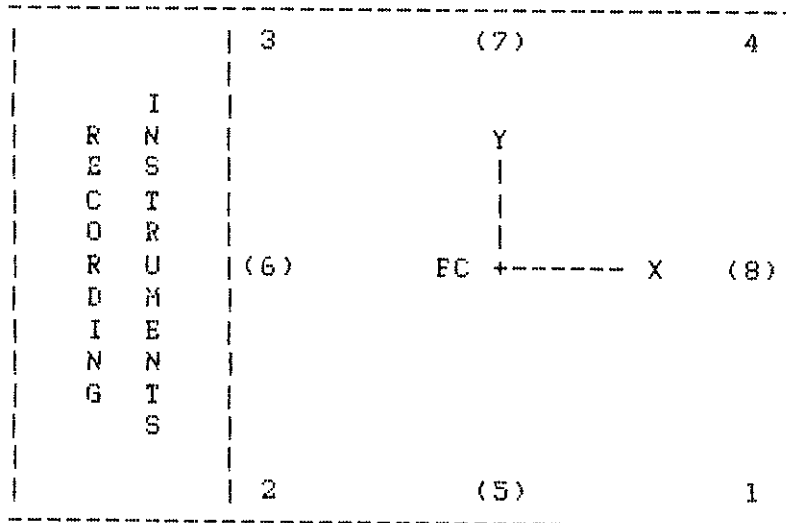
PRINCIPAL POINT OF AUTOCOLLIMATION (PPA), AND
PRINCIPAL POINT OF SYMMETRY (PPS)

REFERRED TO FC, SEE DIAGRAM

	X (MM)	Y (MM)
PPA	-0.008	-0.002
S	0.002	-0.008

FIDUCIAL MARKS, REFERRED TO FC

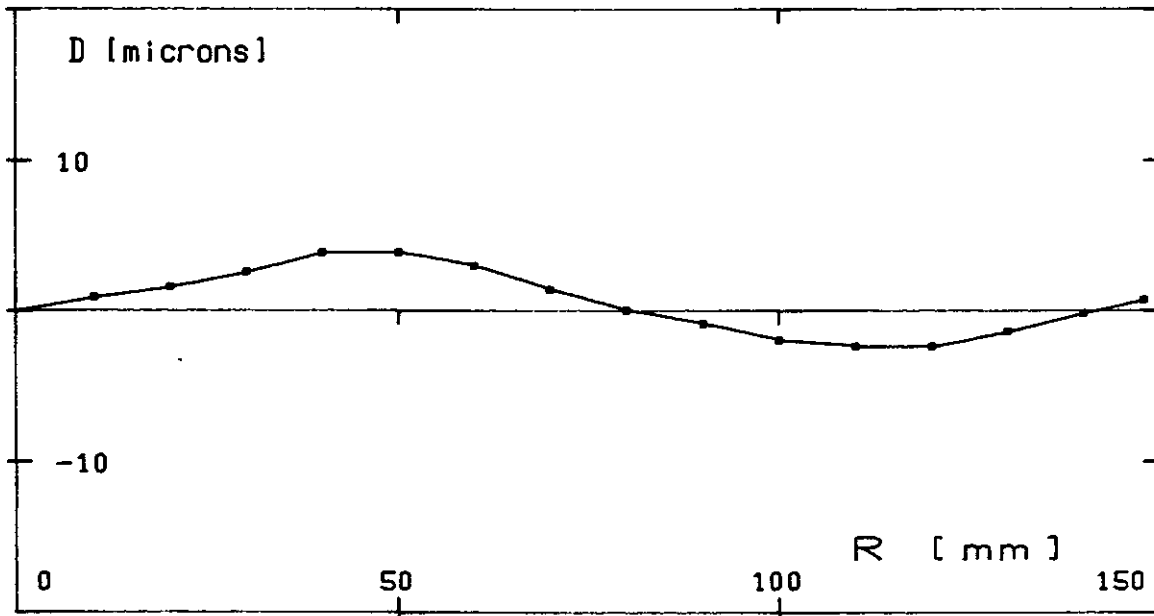
	X (MM)	Y (MM)		X (MM)	Y (MM)
1	105.999	-106.000	5	0.000	-109.996
2	-106.001	-106.000	6	-109.999	0.000
3	-106.001	106.002	7	0.001	110.001
4	106.002	106.001	8	109.999	0.004



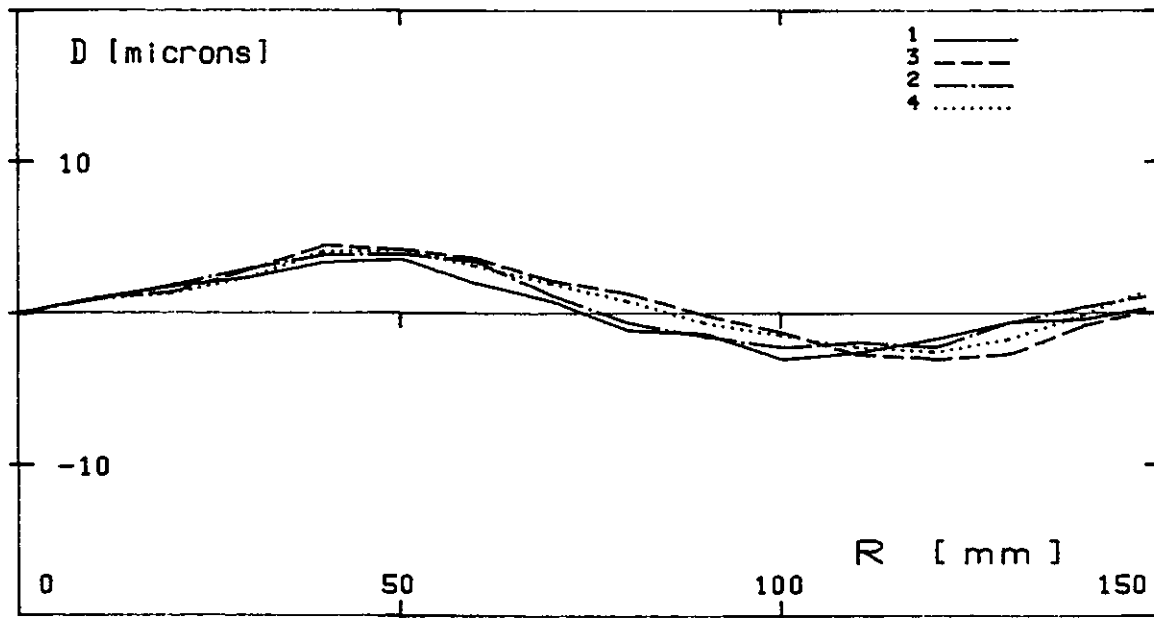
AS SEEN ON FOCAL PLANE FRAME



APERTURE : F / 4.0
FILTER ON GONIOMETER : 450 NM
FILTER ON CAMERA : --
P.D. (900 m) : 213.72 MM



MEAN RADIAL DISTORTION CURVE



RADIAL DISTORTION FOR SEMI-DIAGONALS REFERRED TO PPS

