

CAMERA CALIBRATION CERTIFICATE


CAMERA TYPE : RC10
LENS TYPE : 15 UAG II
LENS NO. : 3113

CALIBRATION DATE : 21.08.92

LEICA HEERBRUG LTD

Leica

(Leica Heerbrug Ltd
CH-5400 Heerbrug)

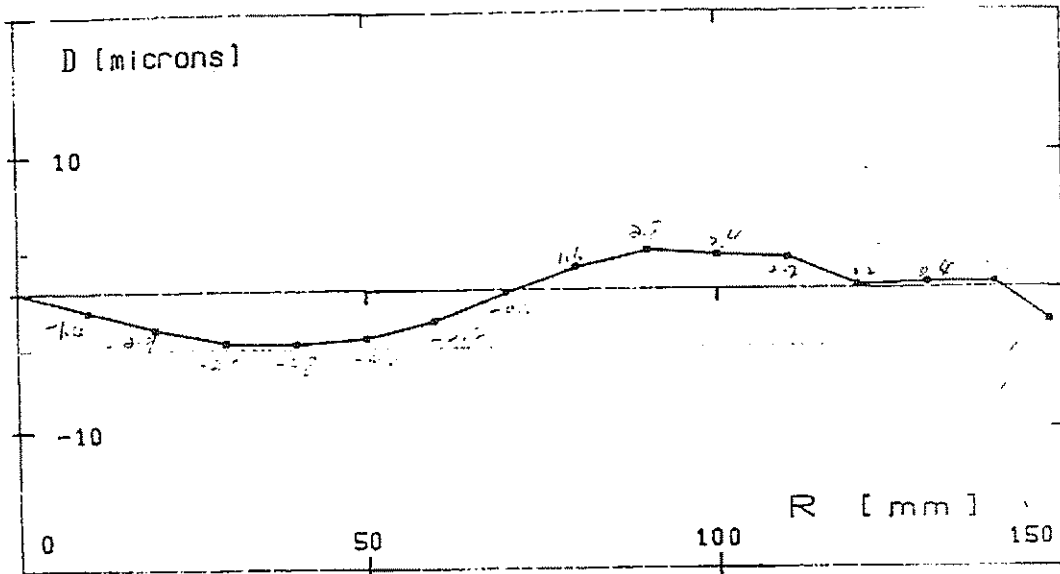
Calibration Department
Signature 

~~7507708~~

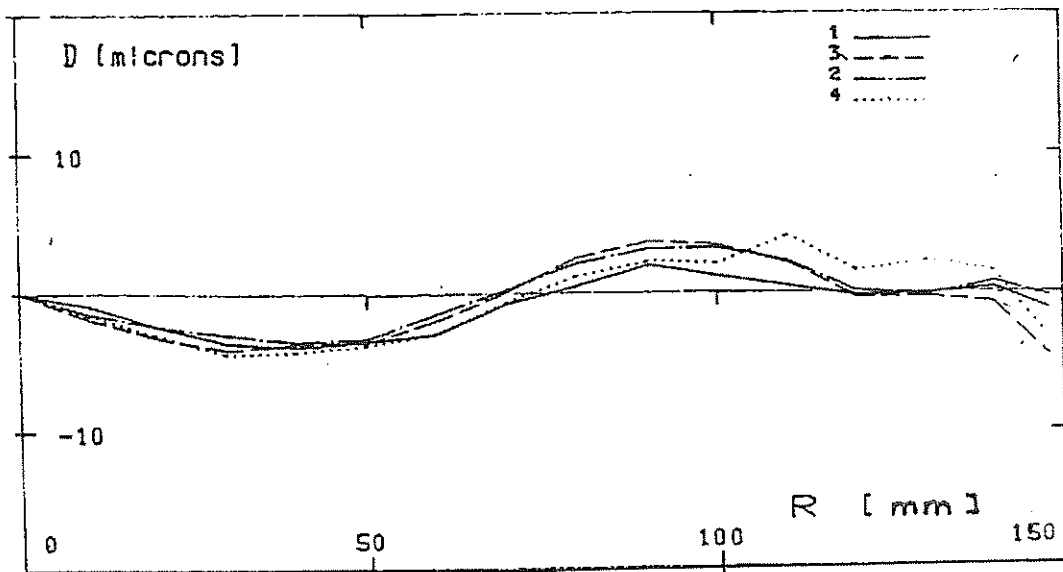
RC10 15 UAG II NO. 3113

21.08.92

APERTURE : F / 4.0
FILTER ON GONIOMETER : 450 NM
FILTER ON CAMERA : --
C.F.L. : 152.99 MM



MEAN RADIAL DISTORTION CURVE



RADIAL DISTORTION FOR SEMI-DIAGONALS REFERRED TO PPS

AMERA CALIBRATION

AMERA: RC10 LENS: 15 UAG II NO.: 3113 CALIBRATION DATE: 21.08.92

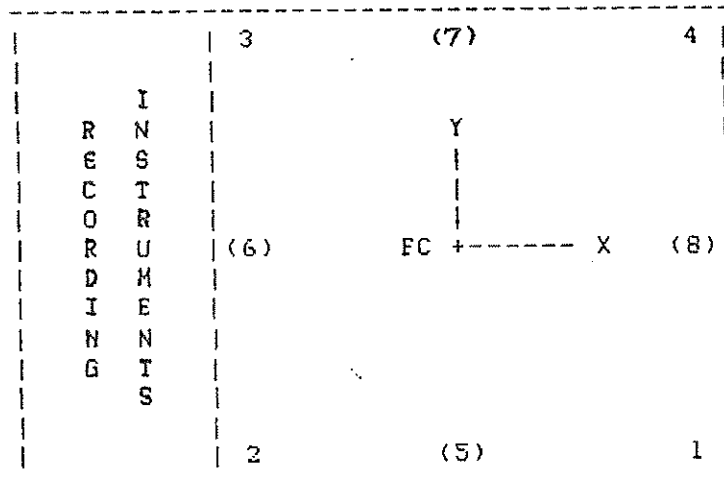
PRINCIPAL POINT OF AUTOCOLLIMATION (PPA) AND
PRINCIPAL POINT OF SYMMETRY (PPS)

REFERRED TO PC, SEE DIAGRAM

	X (MM)	Y (MM)
PPA	-0.011	0.007
PPS	-0.022	-0.002

INDUCIAL MARKS, REFERRED TO FC

	X (MM)	Y (MM)
1	105.999	-105.999
2	-105.998	-105.998
3	-106.008	106.008
4	106.001	106.001



AS SEEN ON FOCAL PLANE FRAME



CAMERA CALIBRATION

CAMERA: RC10 LENS: 15 UAG II NO.: 3113 CALIBRATION DATE: 21.08.92

PERTURE : F / 4.0
 FILTER ON GONIOMETER : 450 NM
 FILTER ON CAMERA : --
 CALIBRATED FOCAL LENGTH : 152.99 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	-0.9	-1.9	-1.5	-1.6	-1.4
20	-2.4	-3.2	-2.4	-3.0	-2.7
30	-3.6	-4.1	-3.0	-4.4	-3.7
40	-3.9	-3.6	-3.5	-4.2	-3.8
50	-3.4	-3.5	-3.2	-3.7	-3.4
60	-2.9	-1.9	-1.4	-2.9	-2.2
70	-0.7	0.1	0.3	-0.6	-0.2
80	0.8	2.6	2.2	1.2	1.6
90	2.0	3.7	3.2	2.3	2.8
100	1.1	3.4	3.2	2.1	2.4
110	0.4	2.1	2.2	4.1	2.2
120	-0.3	-0.4	0.0	1.5	0.2
130	-0.1	-0.4	-0.2	2.3	0.4
140	0.3	-0.8	0.7	1.4	0.4
148	-1.3	-4.7	-0.4	-3.4	-2.4

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	40	45
RAD.	83	93	82	51	44	53	72	68	25	12
TANG.	83	65	45	44	41	34	44	44	24	15

AWAR (AREA WEIGHTED AVERAGE RESOLUTION) IN LP/MM : 47