

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC30
LENS TYPE : 15/4 UAG-S
LENS NO. : 13260

Calibration date: 05.09.1997

LEICA AG, HEERBRUGG

Leica

*Leica Heerbrugg Ltd
CH-9435 Heerbrugg*

Calibration Department

Supervisor

F8 T08

Aperture: 4.0
 Filter on goniometer: VIS (400 - 700 NM)
 Filter on camera: -
 C.F.L. : 153.282 mm

Radial distortion (micrometers) referred to principal point of symmetry (PPS)
 (Positive values denote image displacement away from center)

Radius mm	Half - Sides				Mean
	1	3	2	4	
10	1.0	0.5	0.7	0.2	0.6
20	1.3	0.4	1.2	0.4	0.8
30	1.3	-0.1	1.5	-0.3	0.6
40	1.2	-0.1	1.4	-0.4	0.5
50	1.4	-0.6	1.0	-0.6	0.3
60	1.1	-0.6	1.6	-0.8	0.3
70	1.6	-0.1	1.2	-0.1	0.6
80	1.1	0.6	1.1	0.1	0.7
90	2.1	1.3	1.0	0.2	1.1
100	1.4	1.4	0.9	0.6	1.0
110	2.1	0.9	0.2	1.1	1.0
120	2.6	1.3	-0.4	1.3	1.2
130	1.2	1.4	-0.6	0.7	0.6
140	-2.3	0.9	-3.3	-2.5	-1.8
148	-3.7	-2.9	-5.5	-6.7	-4.7

Photographic resolution (line pairs per millimeter)

International 3-line test-chart, contrast (log) : 2.0

Aperture: 4.0
 Filter: 450 NM
 Film: KODAK PANATOMIC X 2412
 Developer: KODAK HC110

Angle (deg)	0	5	10	15	20	25	30	35	40	45
Radial:	117	117	103	101	87	106	128	121	90	83
Tangential:	117	116	114	87	92	108	111	88	61	47

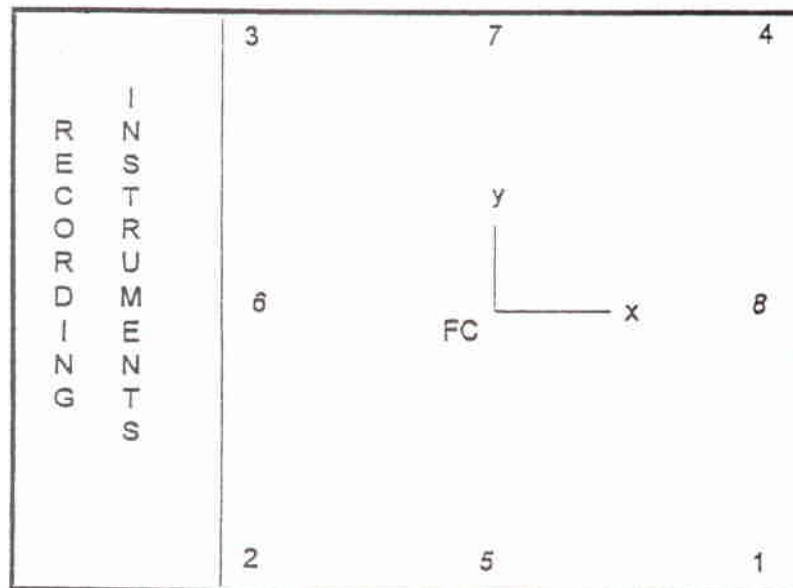
AWAR (Area weighted average resolution) in lp/mm: 100

Principal point of autocollimation (PPA) and
principal point of symmetry (PPS)
referred to central cross (FC), see diagram

	x (mm)	y (mm)
PPA	-0.009	0.002
PPS	-0.010	-0.005

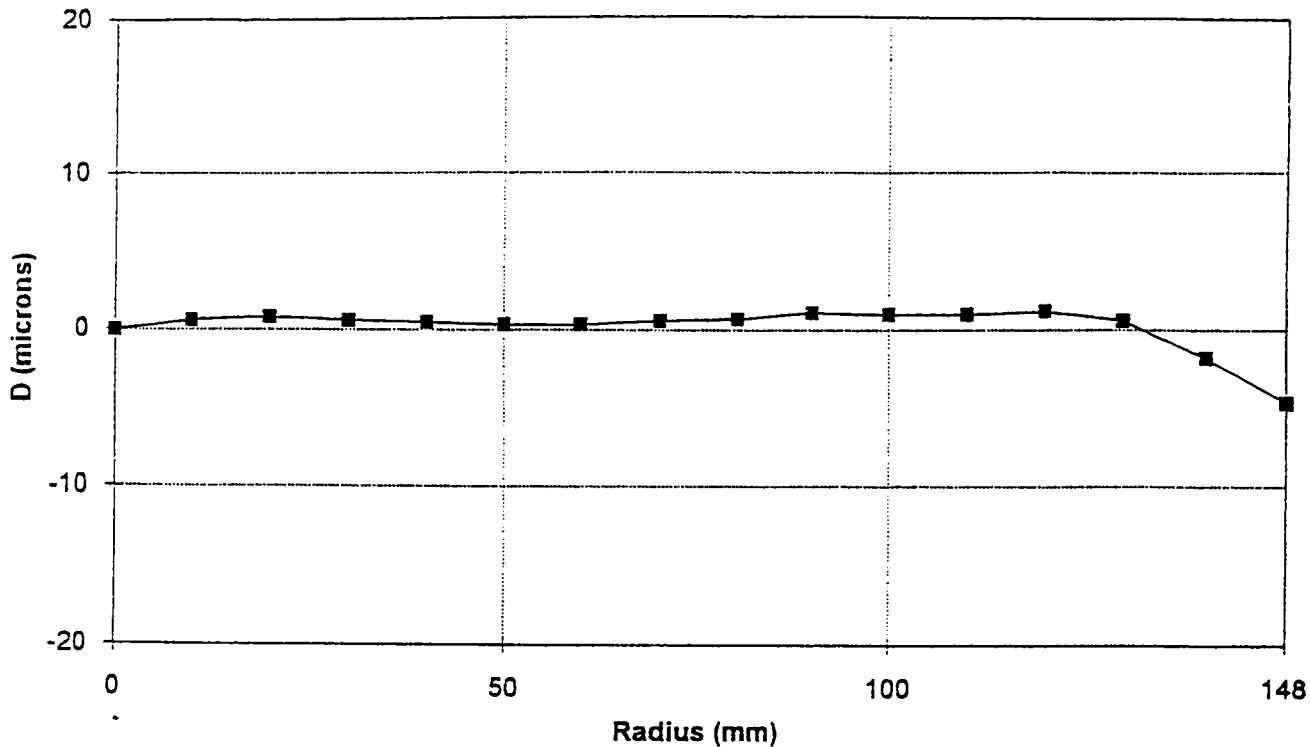
Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	105.998	-105.997	5	-0.006	-112.003
2	-106.008	-106.008	6	-112.005	-0.002
3	-105.997	105.997	7	0.003	112.003
4	106.006	106.006	8	112.006	0.006

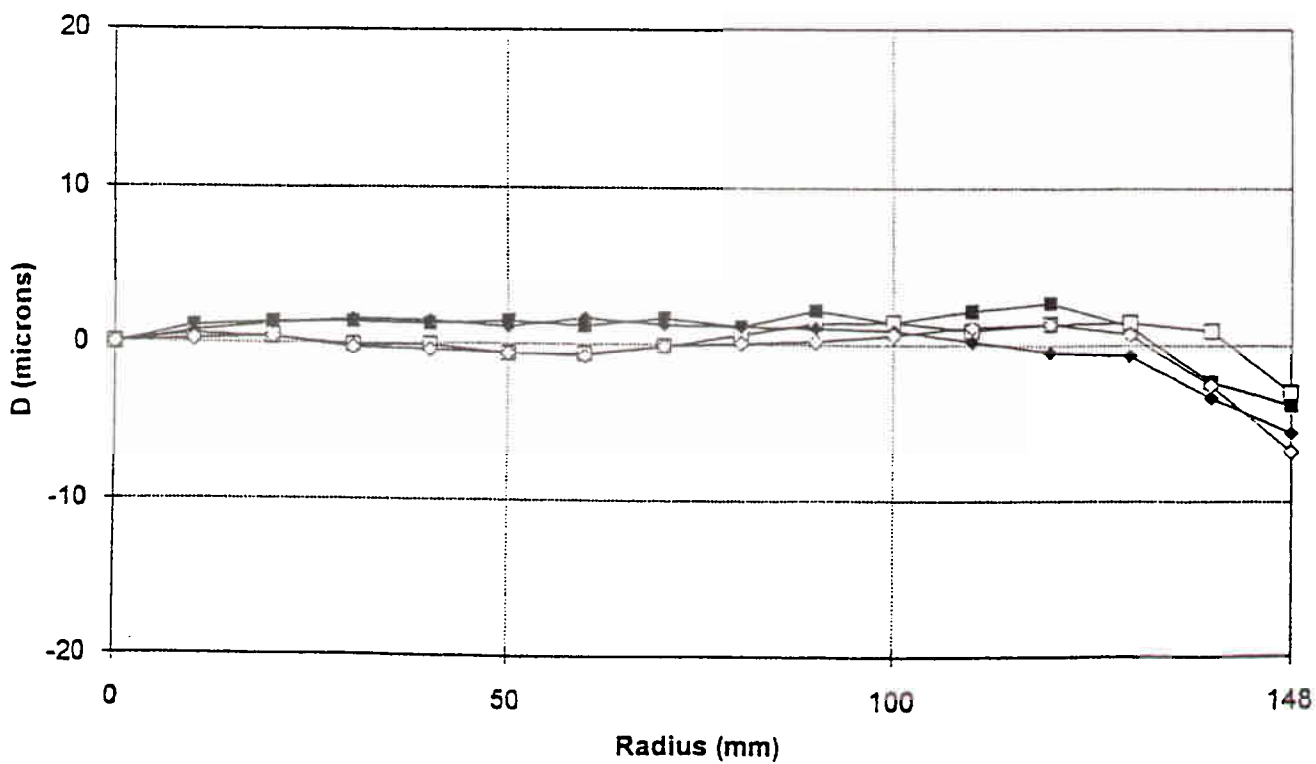


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Mean radial distortion



Radial distortion for semi-diagonals referred to PPS



—■— 1 —□— 3 —◆— 2 —◇— 4

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