

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC30
LENS TYPE : 15/4 UAG-S
LENS NO. : 13242

Calibration date: 15.12.1995

LEICA AG, HEERBRUGG

Leica

*Leica Heerbrugg Ltd
CH-9435 Heerbrugg*

*Calibration Department
Supervisor*



Aperture: 4.0
 Filter on goniometer: VIS (400 - 700 NM)
 Filter on camera: --
 C.F.L. : 152.82 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	-0.2	-0.6	-0.5	-0.4	-0.4
20	-0.7	-1.2	-0.4	-0.6	-0.7
30	-0.9	-1.7	-0.3	-1.5	-1.1
40	-0.9	-1.9	-0.4	-1.7	-1.2
50	-0.6	-2.5	-0.1	-2.0	-1.3
60	-1.0	-2.2	0.5	-2.0	-1.1
70	0.0	-1.9	0.8	-1.4	-0.6
80	-0.6	-0.9	1.0	-0.5	-0.2
90	0.7	0.0	1.1	0.2	0.5
100	0.9	0.8	2.3	1.0	1.2
110	1.0	1.2	2.6	1.8	1.6
120	1.3	1.2	2.0	1.9	1.6
130	0.7	1.6	1.7	2.1	1.5
140	-0.7	0.1	-0.6	0.8	-0.1
148	-3.4	-3.0	-3.4	-0.9	-2.6

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	104	115	90	87	119	128	96	80	83
Tangential:	117	116	114	87	92	96	111	99	87	47

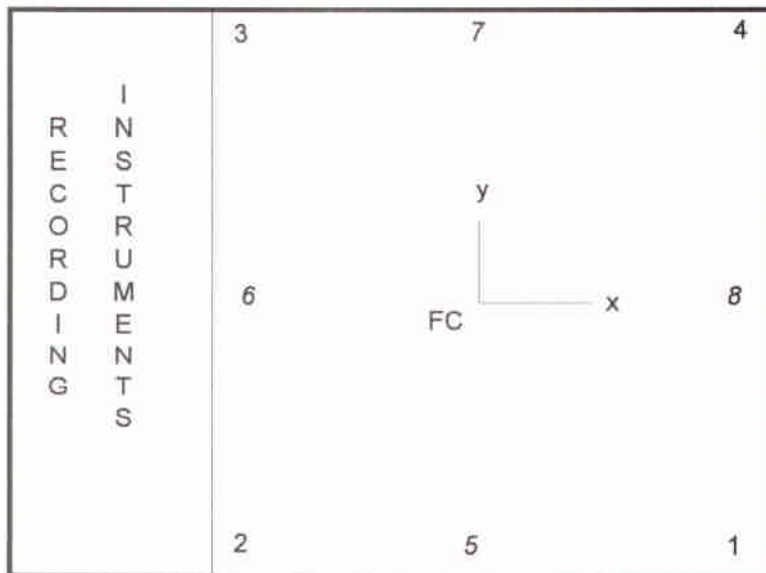
AWAR (Area weighted average resolution) in lp/mm: 100

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

	x (mm)	y (mm)
PPA	-0.005	-0.007
PPS	-0.004	0.000

Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	105.997	-105.995	5	-0.004	-111.995
2	-106.002	-106.001	6	-112.003	-0.001
3	-106.000	105.998	7	0.001	111.992
4	106.000	105.999	8	112.000	0.001

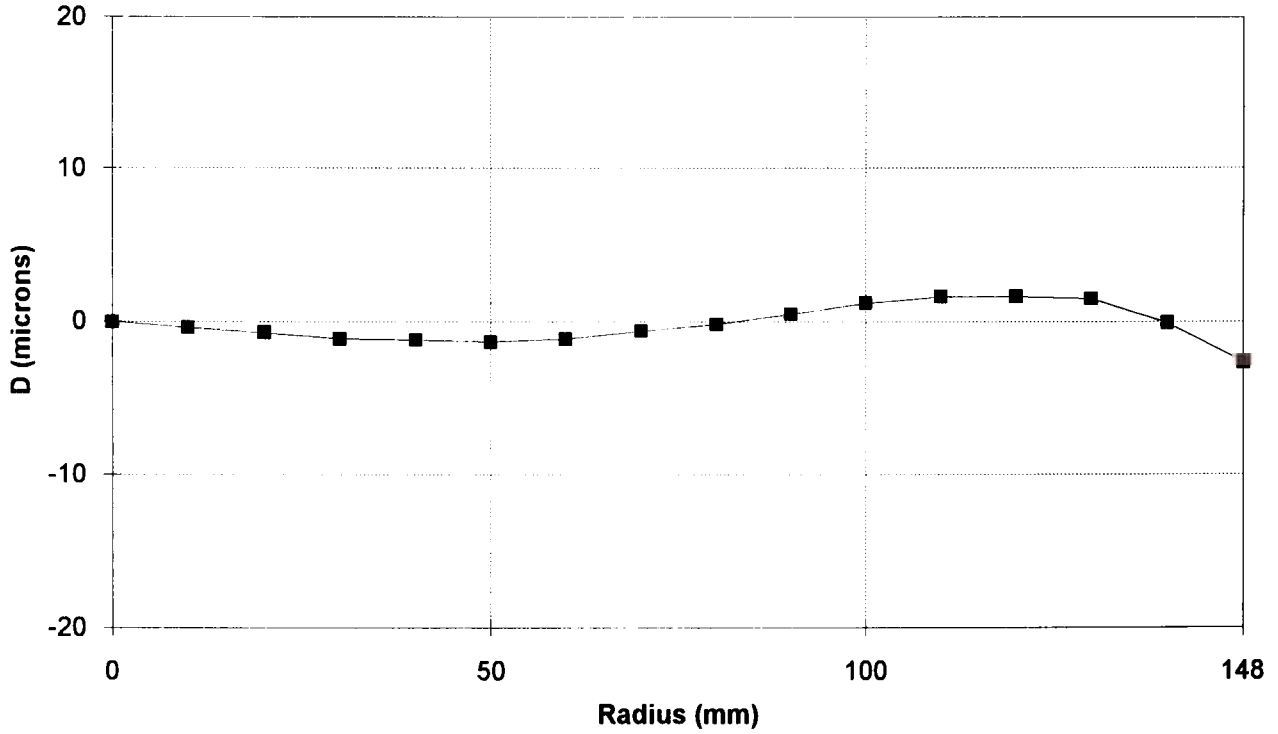


as seen on focal plane frame



Aperture: 4.0
Filter on goniometer: VIS (400 - 700 NM)
Filter on camera: --
C.F.L. : 152.82 mm

Mean radial distortion



Radial distortion for semi-diagonals referred to PPS

