

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC30
LENS TYPE : 15/4 UAG-S
LENS NO. : 13258

Calibration date: 13.04.2005

LEICA AG, HEERBRUGG

 **swissoptic**
SwissOptic AG
Heinrich-Wild-Strasse
CH-9435 Heerbrugg
Schweiz



Aperture: 4.0
 Filter on goniometer: VIS (400-700 NM)
 Filter on camera: --
 C.F.L. : 153.15 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	0.0	-0.7	-0.1	-0.6	-0.3
20	-0.7	-1.5	-0.5	-1.0	-0.9
30	-1.5	-2.2	-1.0	-2.1	-1.7
40	-1.5	-2.4	-1.3	-2.2	-1.8
50	-1.6	-2.9	-1.4	-2.4	-2.0
60	-2.1	-2.7	-1.0	-2.5	-2.0
70	-1.5	-2.6	-1.0	-1.9	-1.7
80	-1.4	-1.8	-0.5	-1.2	-1.2
90	0.1	-1.3	0.1	-0.5	-0.4
100	0.6	-0.8	1.3	0.4	0.3
110	1.1	-0.1	2.1	1.3	1.1
120	1.7	0.1	1.7	1.4	1.2
130	1.2	0.4	1.9	2.1	1.4
140	0.5	1.5	1.5	2.1	1.4
148	-1.8	2.4	0.3	2.4	0.8

Photographic resolution (line pairs per millimeter)

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

Aperture: 4.0
 Filter: VIS (400-700 NM)
 Film: KODAK PANATOMIC X 2412
 Developer: KODAK HC110

Angle (deg)	0	5	10	15	20	25	30	35	40	45
Radial:	131	147	129	101	110	106	128	108	64	74
Tangential:	131	146	127	109	103	96	99	88	77	41

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

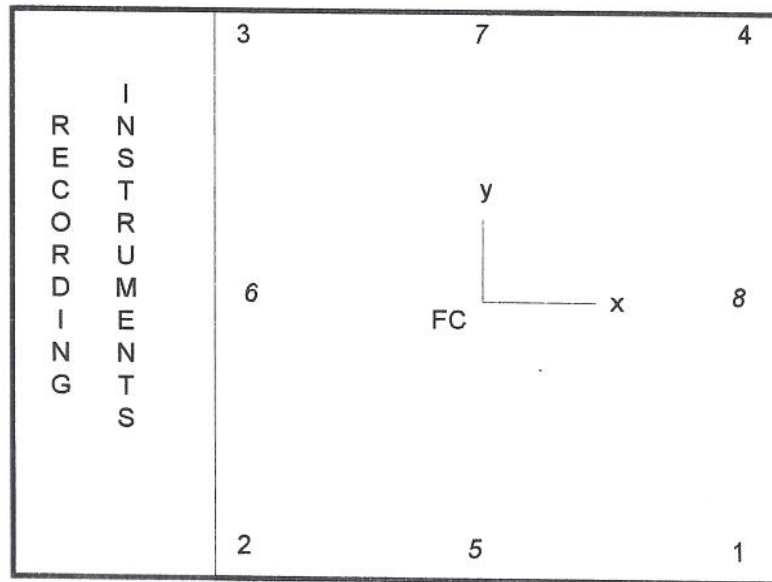


Principal point of autocollimation (PPA) and principal point of symmetry (PPS) referred to central cross (FC), see diagram

	x (mm)	y (mm)
PPA	0.011	0.002
PPS	0.007	0.001

Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	106.000	-105.998	5	-0.002	-112.004
2	-106.000	-106.000	6	-112.002	0.004
3	-106.000	105.999	7	-0.002	112.004
4	106.000	106.000	8	111.995	0.002

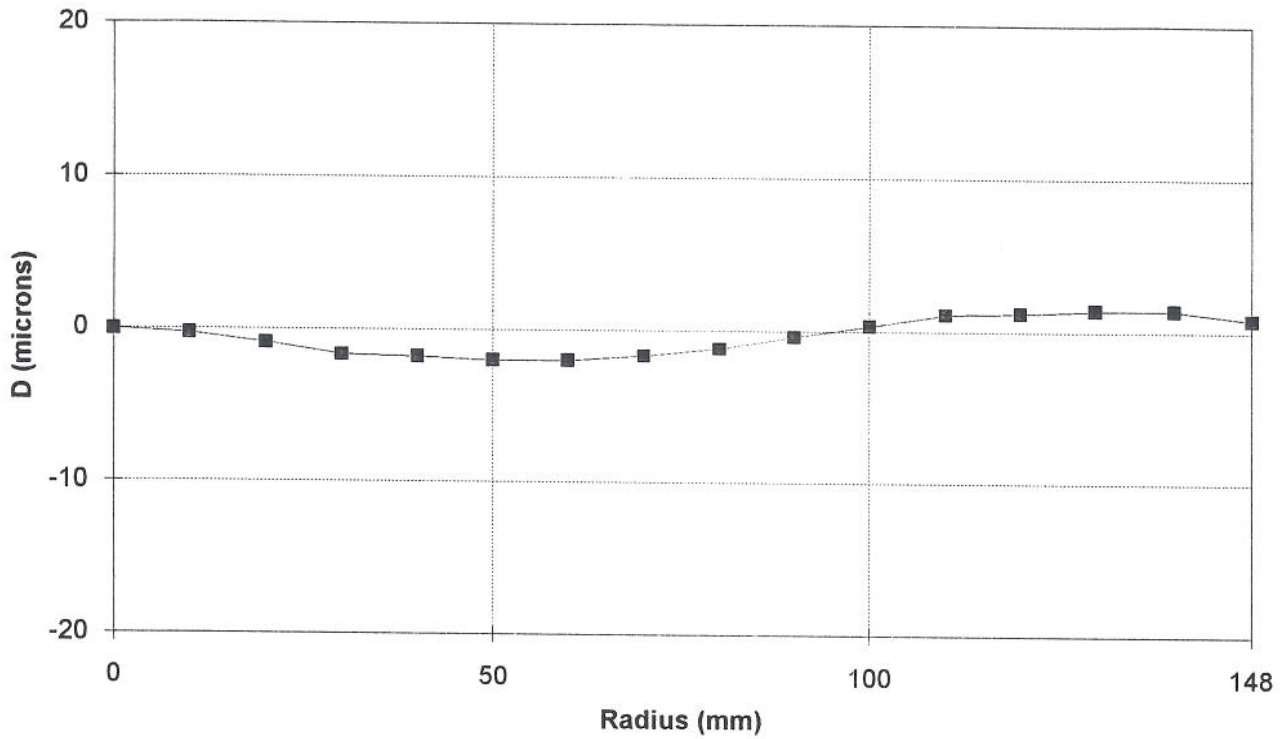


as seen on focal plane frame



Aperture: 4.0
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Mean radial distortion



Radial distortion for semi-diagonals referred to PPS

