

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC 30
LENS TYPE : 30/4 NAT-S
LENS NO. : 17111

Calibration date: 30.03.1999

SwissOptic AG, Heerbrugg



Aperture: 4.0
 Filter on goniometer: VIS (400 - 700 NM)
 Filter on camera: --
 Principal distance for focussing distance 850 m : 302.973 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	0.4	-0.4	0.6	-0.1	0.1
20	-0.1	-1.2	0.7	-0.5	-0.2
30	0.1	-1.8	1.2	-1.3	-0.4
40	0.2	-0.5	1.1	-0.1	0.1
50	0.7	-0.8	1.4	0.1	0.3
60	0.5	-0.2	2.2	0.6	0.7
70	1.2	-0.9	2.0	0.4	0.6
80	0.8	-0.5	2.1	1.0	0.8
90	1.9	-0.7	2.3	1.1	1.1
100	0.5	-0.3	1.8	1.2	0.8
110	-0.7	-1.6	0.8	0.3	-0.3
120	-2.0	-2.1	-1.1	-0.7	-1.4
130	-2.9	-2.1	-1.2	-0.3	-1.6
140	-2.8	-1.3	-1.0	-0.3	-1.3
148	0.1	1.9	2.1	3.0	1.7

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
Radial:	106	106	92	127	88	96
Tangential:	106	105	128	123	94	87

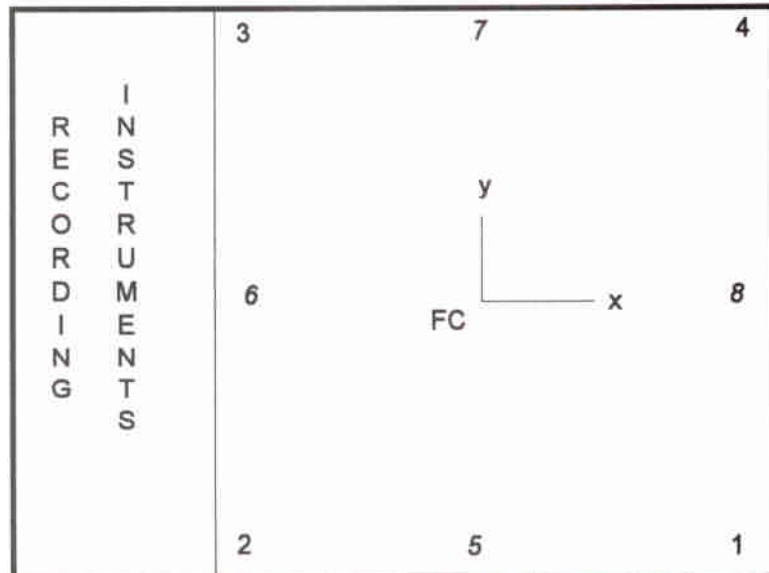
AWAR (Area weighted average resolution) in lp/mm: 105

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

	x (mm)	y (mm)
PPA	-0.002	0.024
PPS	-0.004	-0.008

Fiducial marks, referred to central cross (FC)

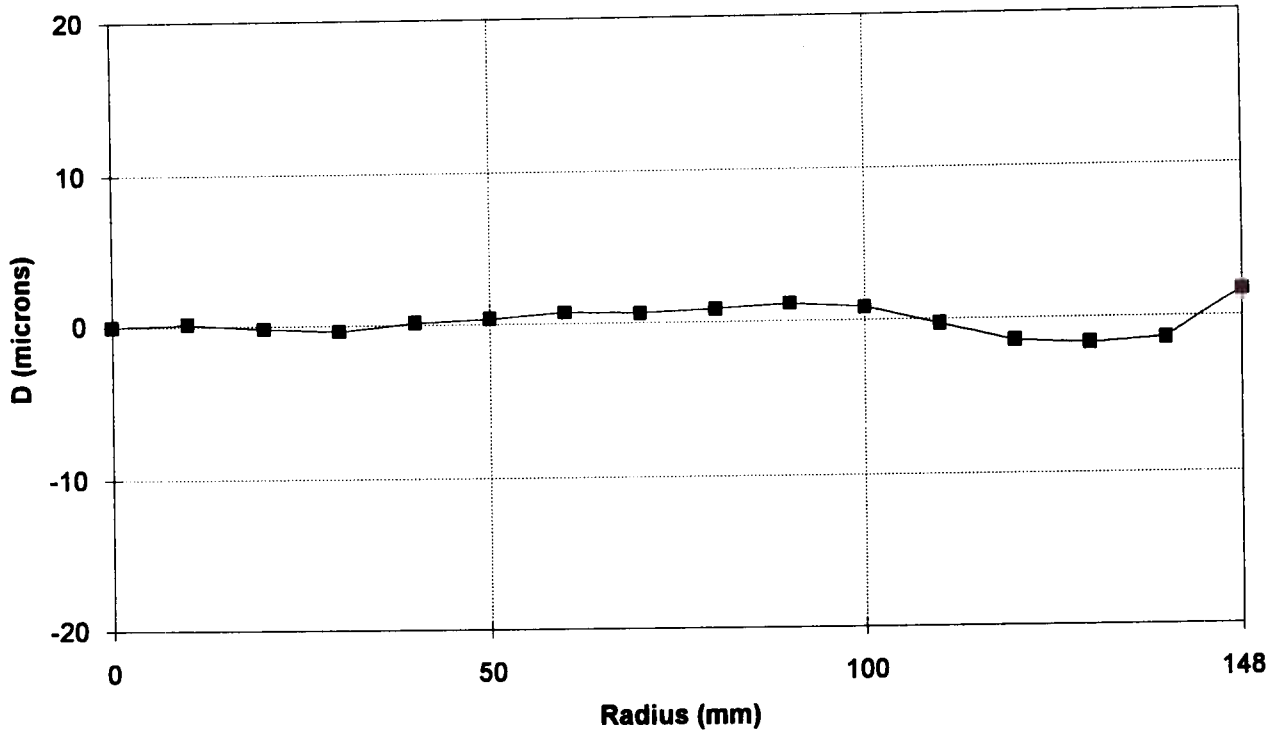
	x (mm)	y (mm)		x (mm)	y (mm)
1	105.999	-105.995	5	-0.007	-111.998
2	-106.007	-106.003	6	-112.007	-0.002
3	-106.003	105.998	7	0.000	111.991
4	106.004	105.999	8	112.006	0.005



as seen on focal plane frame

Aperture: 4.0
Filter on goniometer: VIS (400 - 700 NM)
Filter on camera: --
Principal distance for focussing distance 850 m : 302.973 mm

Mean radial distortion



Radial distortion for semi-diagonals referred to PPS

