

CAMERA CALIBRATION CERTIFICATE

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

Calibration date: 18.01.2000

SwissOptic 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. : 153.279 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	0.8	0.5	0.7	0.6	0.6
20	1.2	0.4	1.1	0.7	0.8
30	1.2	0.0	1.4	-0.1	0.6
40	1.0	-0.1	1.2	-0.4	0.4
50	0.8	-0.8	1.0	-0.6	0.1
60	0.3	-0.6	1.2	-0.9	0.0
70	0.8	-0.3	0.7	-0.1	0.2
80	0.3	0.4	0.8	0.4	0.4
90	1.2	0.9	0.7	0.5	0.8
100	1.1	1.0	0.8	0.8	0.9
110	1.7	0.7	0.2	1.4	1.0
120	2.4	1.0	0.0	1.7	1.2
130	1.1	1.1	0.1	1.2	0.8
140	-2.3	0.5	-2.4	-2.3	-1.6
148	-3.3	-2.8	-4.3	-5.9	-4.0

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:	131	131	115	90	110	119	128	108	80	83
Tangential:	131	116	101	87	92	121	111	62	77	59

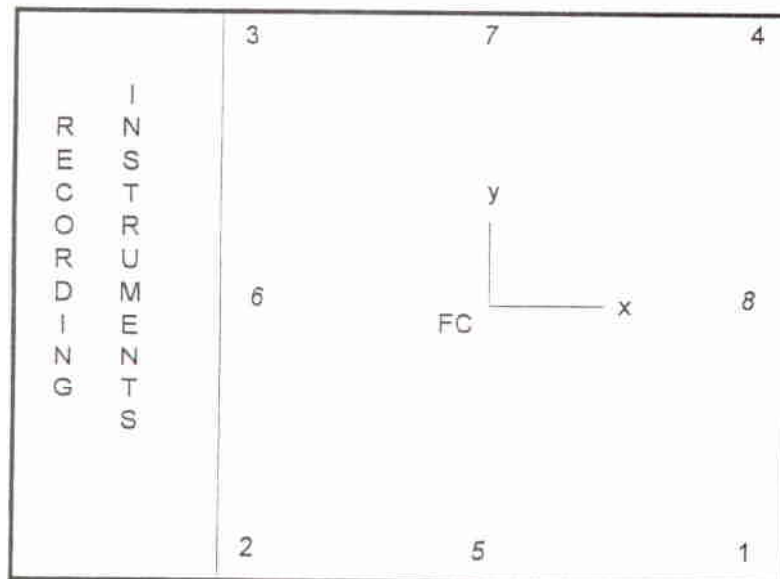
AWAR (Area weighted average resolution) in lp/mm: 98

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

	x (mm)	y (mm)
PPA	-0.012	0.004
PPS	-0.012	-0.002

Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	105.998	-105.995	5	-0.007	-111.999
2	-106.006	-106.006	6	-112.003	-0.002
3	-105.998	105.995	7	0.004	112.003
4	106.005	106.005	8	112.003	0.005

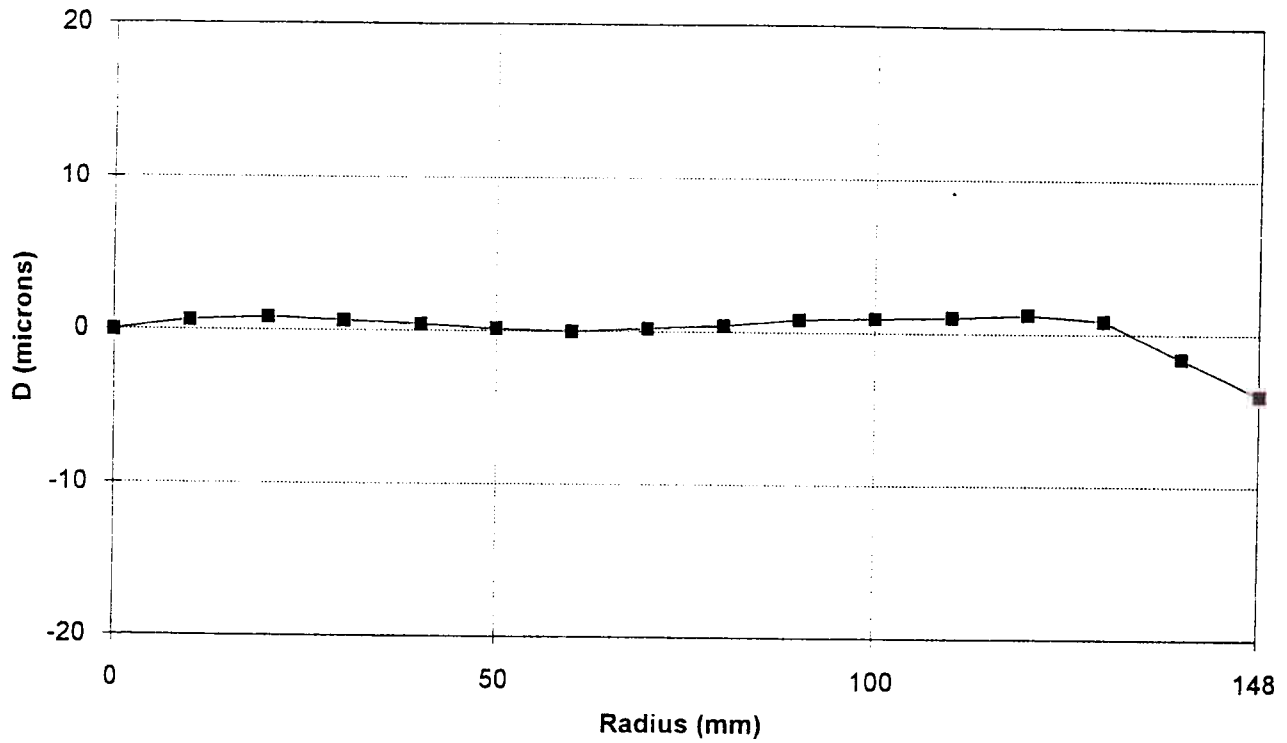


as seen on focal plane frame

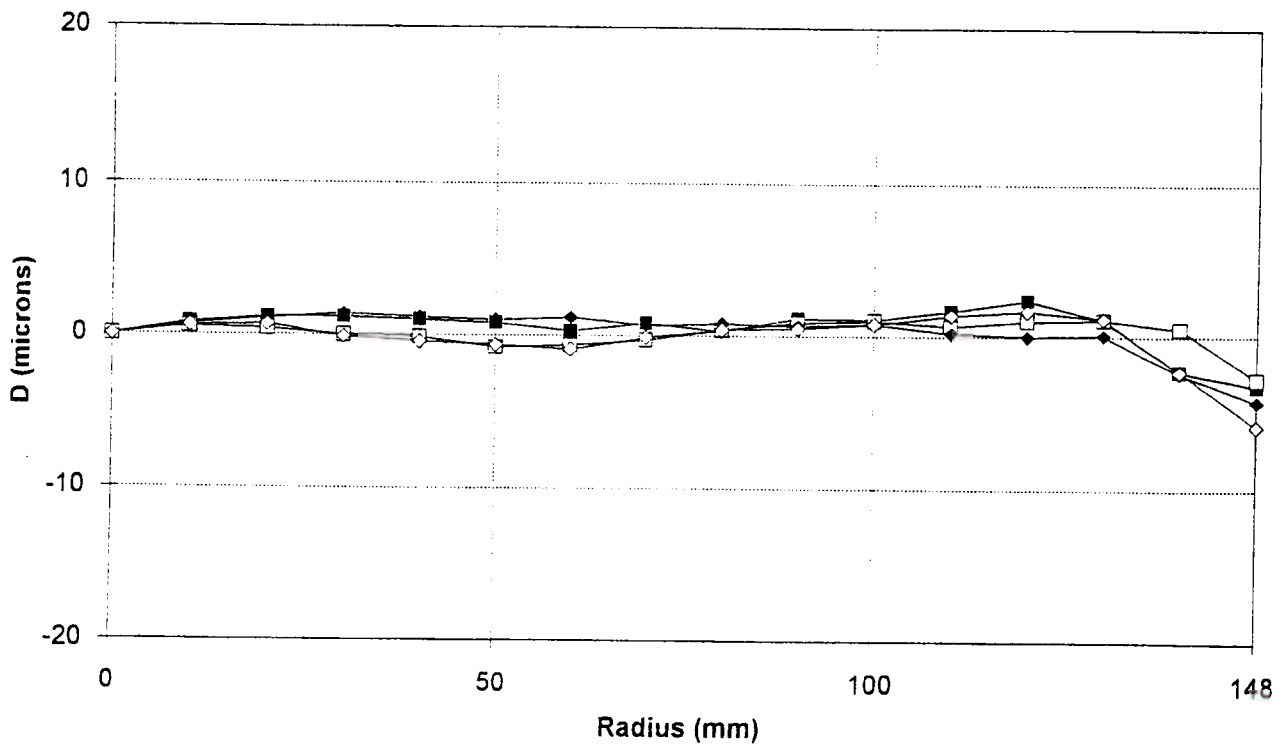


Aperture: 4.0
Filter on goniometer: VIS (400 - 700 NM)
Filter on camera: --
C.F.L. : 153.279 mm

Mean radial distortion



Radial distortion for semi-diagonals referred to PPS



■ 1 □ 3 ◆ 2 ◇ 4

