

CAMERA CALIBRATION CERTIFICATE

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

Calibration date: 28.02.2002

SwissOptic AG, Heerbrugg

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

FC 01/20

Aperture: 4.0
 Filter on goniometer: VIS (400-700 NM)
 Filter on camera: --
 Principal distance for focussing distance 850 m : 302.97 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	-0.5	-0.8	-0.6	0.1	-0.4
20	-1.1	-1.2	-1.3	-1.0	-1.1
30	-0.6	-1.3	-0.5	-0.8	-0.8
40	-0.9	0.0	-0.9	0.2	-0.4
50	-0.9	0.3	-0.6	1.1	0.0
60	-1.2	1.1	0.2	1.7	0.4
70	-0.9	0.6	0.0	1.1	0.2
80	-0.7	0.6	0.5	1.4	0.4
90	0.2	0.0	0.6	1.5	0.5
100	-0.9	-1.6	-0.3	-0.2	-0.7
110	-2.0	-0.3	1.0	2.1	0.2
120	-2.1	-1.2	-0.4	0.4	-0.8
130	-1.5	-2.0	-0.3	-0.2	-1.0
140	-1.1	-2.2	0.4	-0.6	-0.8
148	3.3	2.0	4.9	2.8	3.2

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:	118	131	104	127	100	96
Tangential:	106	117	103	110	94	77

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

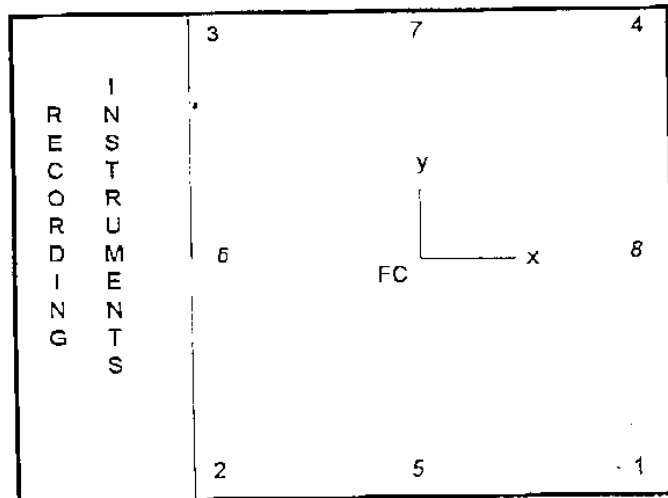
FOCUS
110

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

	x (mm)	y (mm)
PPA	-0.004	0.022
PPS	-0.004	-0.026

Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	105.999	-105.997	5	-0.005	-111.997
2	-106.004	-106.003	6	-112.002	-0.002
3	-106.000	105.999	7	0.002	111.992
4	106.003	106.002	8	112.005	0.003

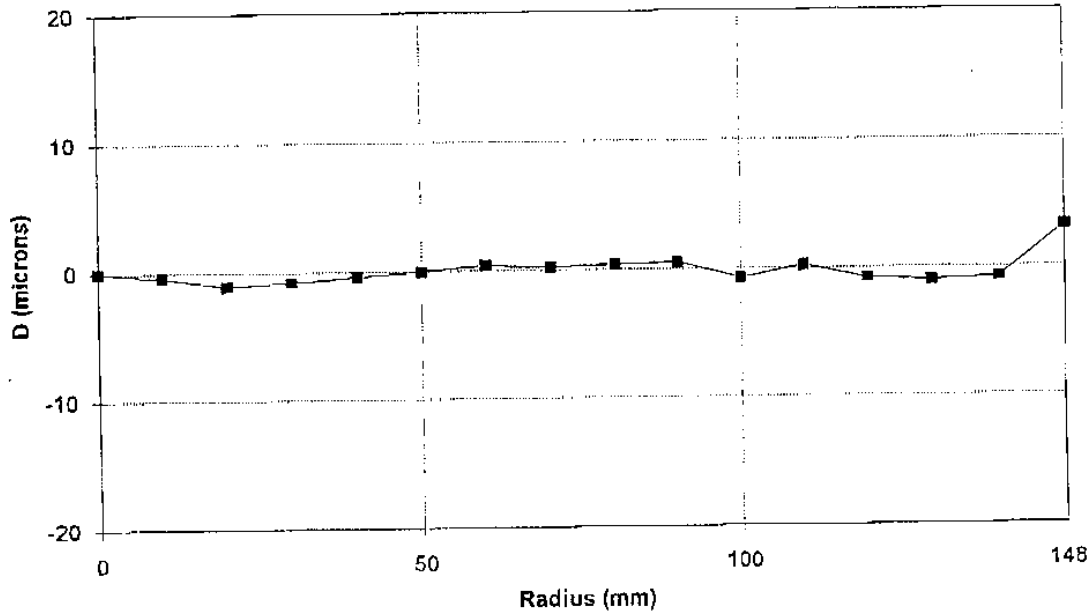


as seen on focal plane frame

FC 013 *fluo*

Aperture: 4.0
Filter on goniometer: VIS (400-700 NM)
Filter on camera: --
Principal distance for focussing distance 850 m : 302.97 mm

Mean radial distortion



Radial distortion for semi-diagonals referred to PPS

