

Camera Calibration Certificate

Object	Aerial Survey Camera Type	Lens Cone Type	Lens Serial-No	Remarks
	RC20	15/4 UAGA-F	13024	

Acceptance	Characteristics	Acceptance	Remarks
	Radial distortion	yes	
	Photographic resolution	yes	
	Principal point of autocollimation (PPA)	yes	
	Principal point of symmetry (PPS)	yes	
	Fiducial marks	yes	
	Mean radial distortion	yes	
	Radial distortion for semi-diagonals referred to PPS	yes	

Inspection			Signature / Remarks
	Date of calibration	26.06.2008	Lens cone operating hours _____
	Inspector	Name Dietsche Paul	Signature: <i>P. Dietsche</i>
		Position Supervisor	
		Inspection-No SO112	
	Inspection plan	Identification-No 487872	
	Version 14.04.1989		
Lens cone calibration	No 870105		
Process specification	Version 24.07.2006		

Maintenance			
	The last date, when service/ overhaul of this lens cone was performed.	27.06.2008	Lens cone operating hours 1470
	Overhaul urgently required:	no	

This Camera Calibration Certificate contains five pages. It may not be reproduced other than in full. Camera Calibration Certificates without signature and seal are not valid.

RC20

15/4 UAGA-F

No.13024

26.06.2008

Calibrated Focal Length (CFL)

Aperture	4.0
Filter on goniometer	VIS (400 - 700 nm)
Filter on camera	--
C.F.L. :	152.87 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	0.7	-0.1	0.7	0.2	0.3
20	0.6	0.0	0.6	0.2	0.3
30	0.2	-0.3	0.5	-0.3	0.0
40	-0.2	0.0	-0.1	-0.4	-0.1
50	-0.7	-0.5	-0.3	-0.7	-0.5
60	-1.4	-0.3	-0.1	-0.9	-0.6
70	-0.8	-0.3	-0.5	-0.6	-0.5
80	-0.8	0.2	0.0	-0.5	-0.2
90	0.6	0.4	0.3	-0.4	0.2
100	0.8	0.3	0.9	-0.4	0.4
110	1.7	0.3	1.6	0.1	0.9
120	1.8	0.6	0.4	0.3	0.7
130	0.6	0.1	-0.4	-0.4	0.0
140	-0.9	0.0	-1.6	-0.5	-0.7
148	-0.7	0.4	-1.5	0.2	-0.4

Photographic resolution [line pairs per millimeter]

Internal 3-line test-chart contrast log 2.0

Apertur:	4,0
Filter:	VIS(400-700nm)
Film:	KODAK PANATOMIC X 2412
Developer:	KODAK HC110

Angle: [deg]	0	5	10	15	20	25	30	35	40	45
Radial:	117	104	92	64	55	60	72	86	71	47
Tangential:	131	104	64	61	58	61	55	50	43	29

AWAR (Area Weighted Average Resolution) in lp/mm

63



Principal point of autocollimation (PPA)

Principal point of symmetry (PPS)

Referred to central cross (FC), see diagram

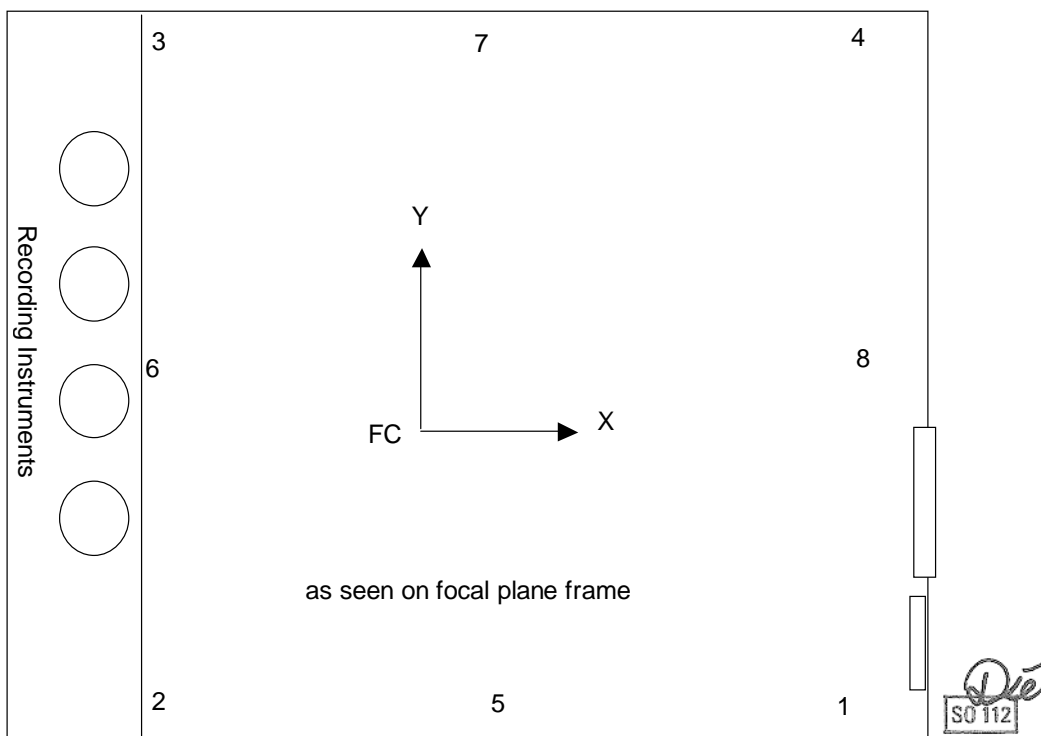
	x[mm]	y[mm]
PPA	-0.009	0.003
PPS	-0.007	0.003

Fiducial marks

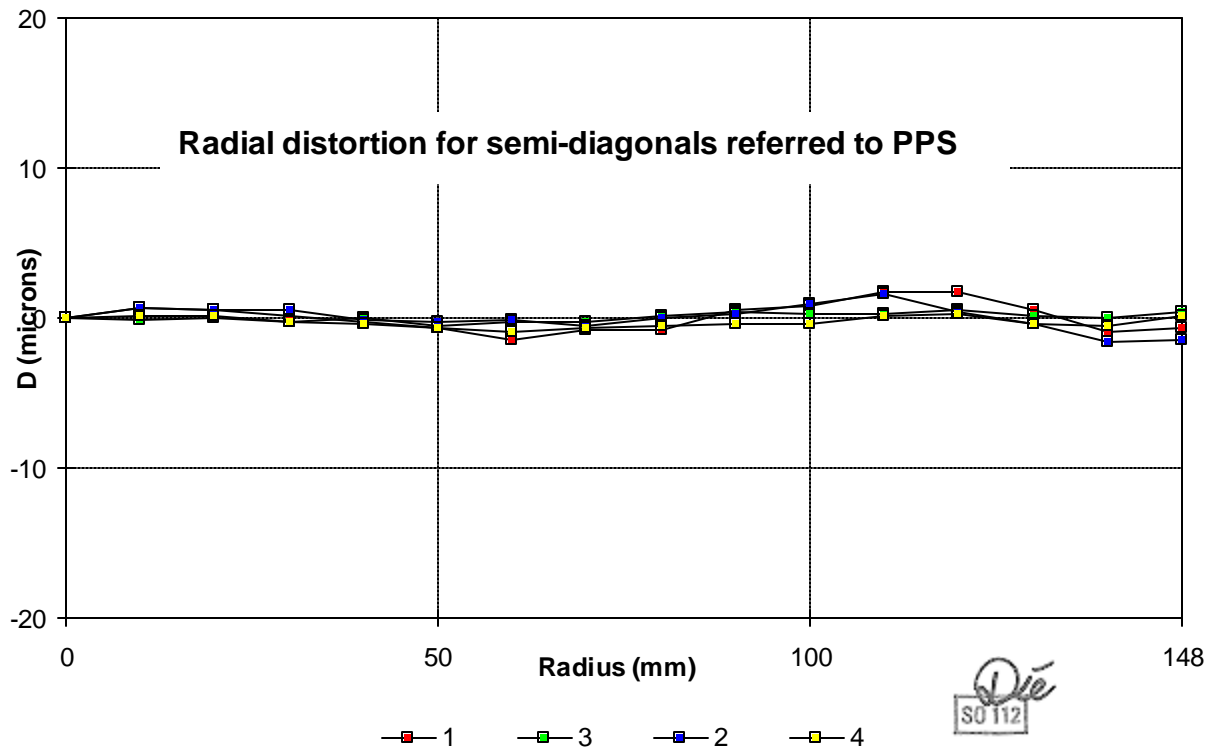
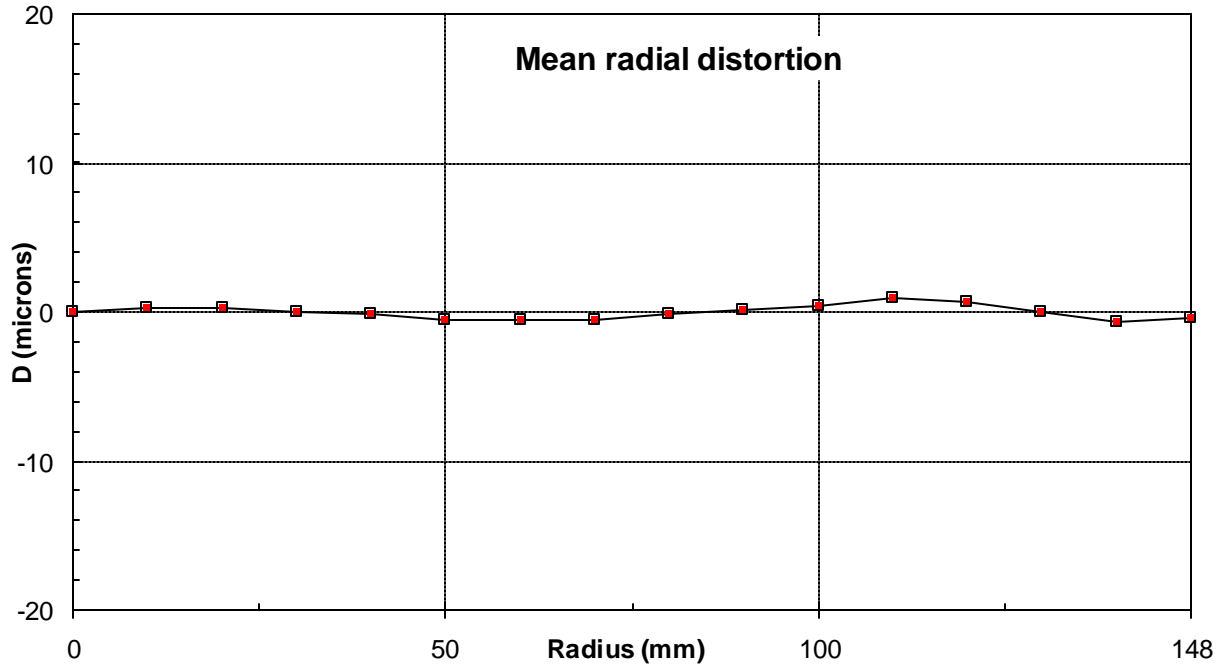
Referred to central cross (FC)

	x[mm]	y[mm]
1	106.003	-106.005
2	-105.992	-105.993
3	-106.003	106.006
4	106.002	106.003

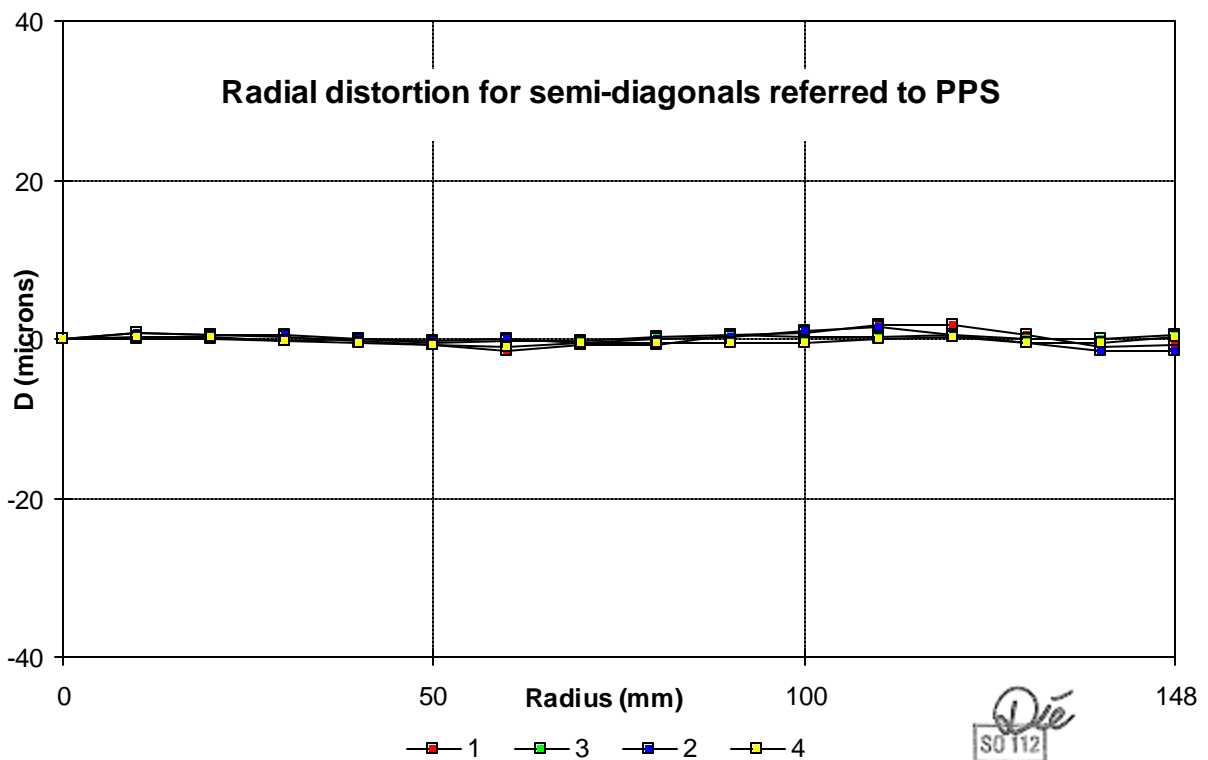
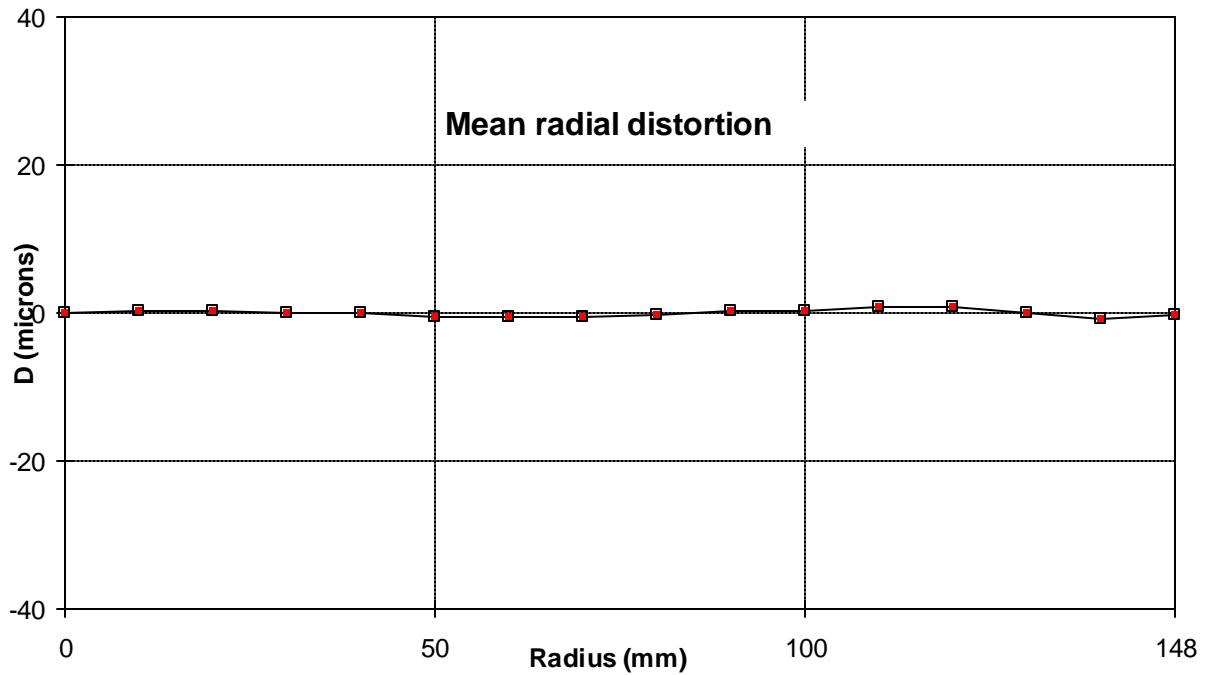
	x[mm]	y[mm]
5	0.014	-109.996
6	-109.994	0.007
7	0.003	110.003
8	110.004	0.000



Aperture:	4.0
Filter on goniometer:	VIS (400 - 700 nm)
Filter on camera:	--
C.F.L. :	152.87 mm



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Filter on goniometer:	VIS (400 - 700 nm)
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