

Camera Calibration Certificate

Object	Aerial Survey Camera Type	Lens Cone Type	Lens Serial-No	Remarks
	RC 30	30/4 NAT-S	17124	

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	04.12.2006	Lens cone operating hours
	Inspector	Name: Dietsche Paul	Signature: 
	Position	Supervisor	
	Inspection stamp-No	S 112	
	Inspection plan	Identification-No: 563450 Version: 14.04.1989	
	Lens cone calibration	No: 870105	
	process specification	Version: 19.01.2000	

Maintenance			Lens cone operating hours	287.5
	The last date, when service/ overhaul this lens cone was performed.	30.11.2006		
	Overhaul urgently required:	no	To avoid any malfunctions / damages, it is recommended to perform a complete service / overhaul as soon as possible. See „Lens calibration process specification“ or „RC 30 Technical Referenz“	

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

RC 30

30/4 NAT-S

No.17124

04.12.2006

Calibrated Focal Length (CFL)

Aperture	4.0
Filter on goniometer	VIS (400 - 700 nm)
Filter on camera	--
Principal distance for focussing distance 850 m	303.16 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	-0.4	0.7	-0.4	0.1
20	0.4	-0.5	0.8	-0.5	0.0
30	0.6	-0.1	1.7	-0.7	0.3
40	1.8	0.8	2.1	-0.2	1.1
50	2.8	1.6	3.0	0.7	2.0
60	2.0	1.7	3.4	0.3	1.8
70	2.3	1.9	3.1	0.6	1.9
80	1.7	2.6	3.5	1.1	2.2
90	1.9	2.9	2.5	1.3	2.1
100	0.6	2.4	2.2	0.8	1.5
110	-0.1	1.3	0.8	0.7	0.6
120	-2.2	-0.9	-2.7	-1.1	-1.7
130	-3.1	-2.8	-2.6	-1.1	-2.4
140	-3.0	-3.5	-2.8	-1.4	-2.6
148	-0.8	-3.5	-0.7	-0.2	-1.3

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				
Radial:	106	117	116	114	111	96				
Tangential:	106	117	103	110	104	97				

AWAR (Area Weighted Average Resolution) in lp/mm

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Principal point of autocollimation (PPA)**Principal point of symmetry (PPS)**

Referred to central cross (FC), see diagram

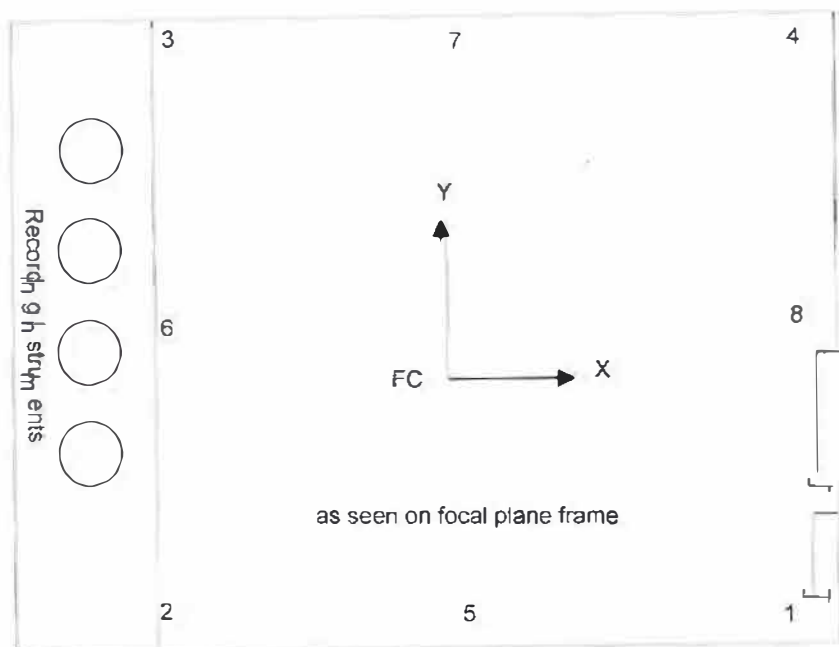
	x[mm]	y[mm]
PPA	0.023	0.010
PPS	-0.021	0.034

Fiducial marks

Referred to central cross (FC)

	x[mm]	y[mm]
1	106.005	-106.005
2	-105.994	-105.995
3	-106.007	106.007
4	105.996	105.997

	x[mm]	y[mm]
5	0.004	-112.002
6	-112.003	0.006
7	-0.004	112.003
8	111.998	-0.004



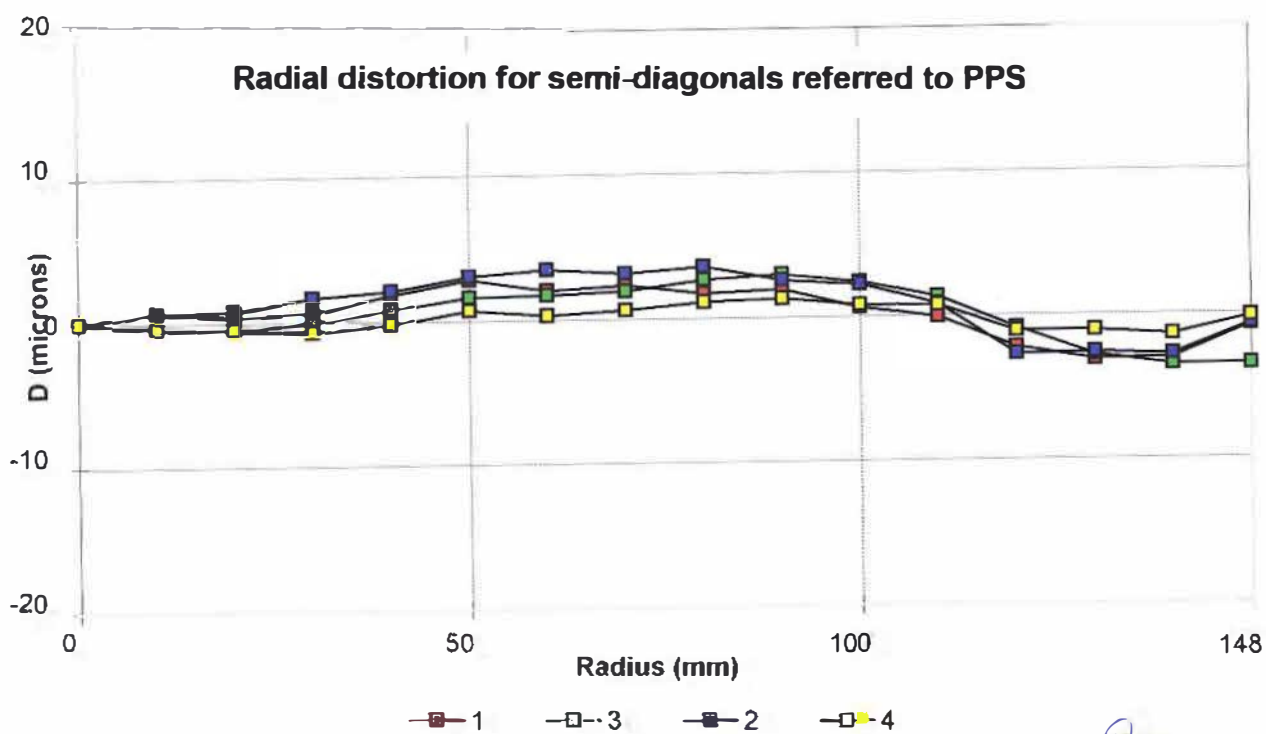
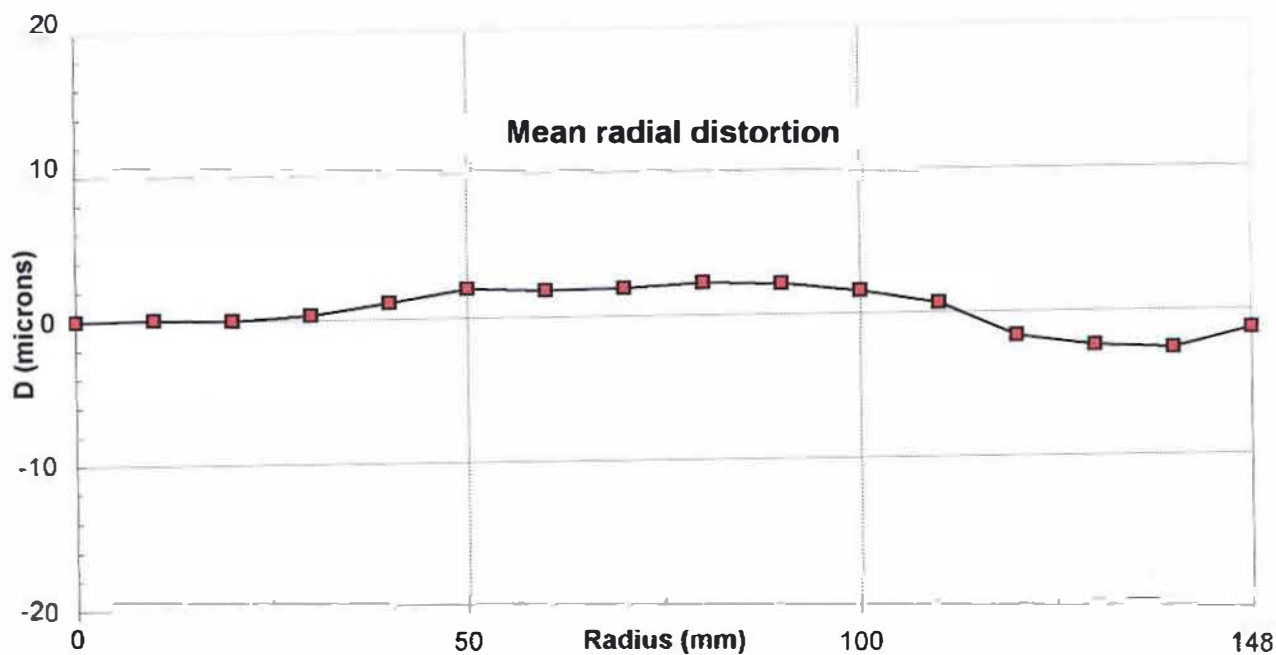

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Aperture:	4.0
Filter on goniometer:	VIS (400 - 700 nm)
Filter on camera:	--
Principal distance for focussing distance 850 m :	303.16 mm



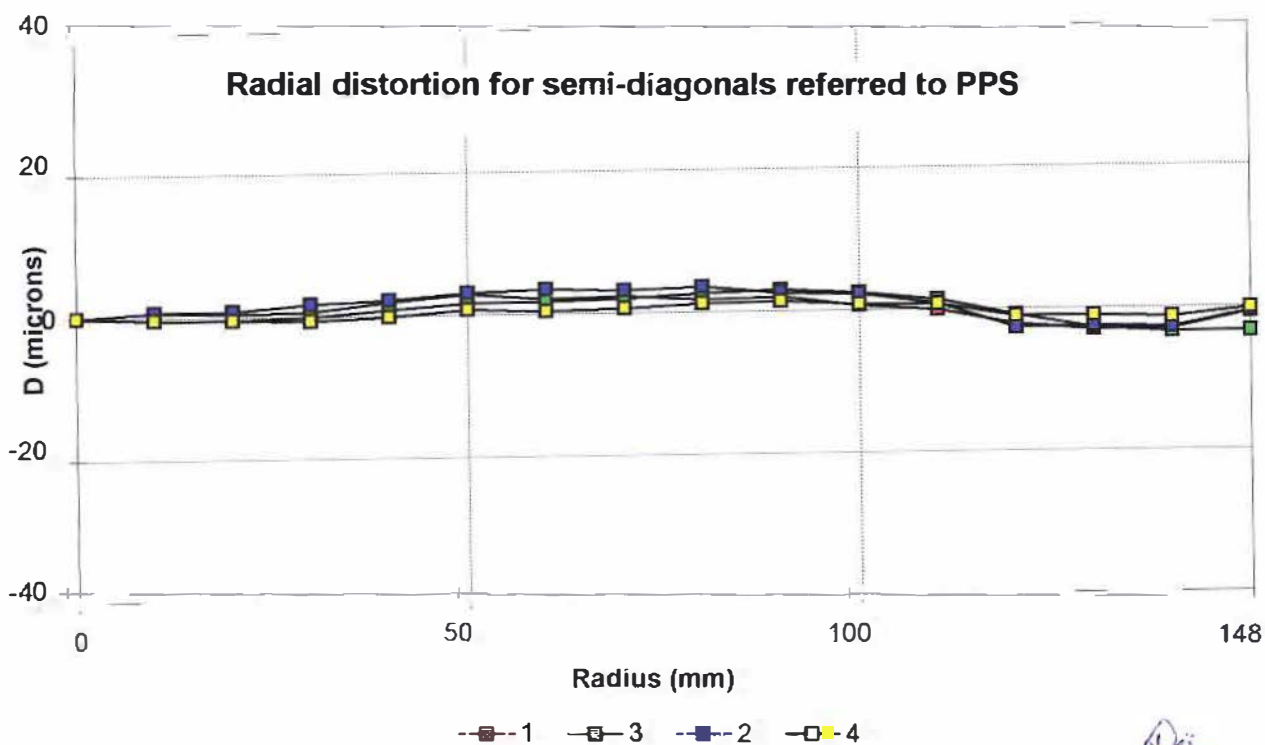
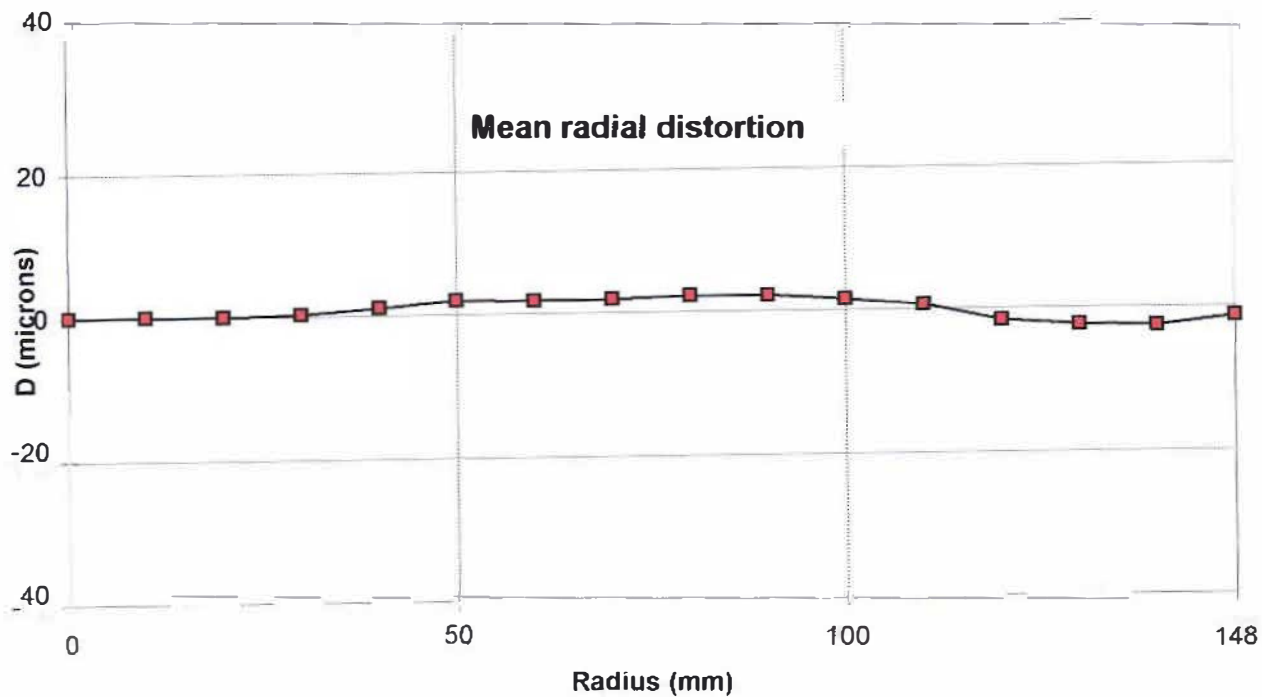
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Aperture:	4.0
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