

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC10
LENS TYPE : 15/4 UAG
LENS NO. : 13003

CALIBRATION DATE : 11.12.86

WILD HEERBRUGG LTD



CH-9435 HEERBRUGG
Calibration Department
Supervisor: *[Signature]*

CAMERA CALIBRATION

CAMERA: RC10 LENS: 15/4 UAG NO.: 13003 CALIBRATION DATE: 11.12.86

APERTURE : F / 4.0
 FILTER ON GONIOMETER : VIS (400 - 700 NM)
 FILTER ON CAMERA : --
 CALIBRATED FOCAL LENGTH : 153.18 MM

RADIAL DISTORTION (MICROMETERS)

 REFERRED TO PRINCIPAL POINT OF SYMMETRY (PPS)
 (POSITIVE VALUES DENOTE IMAGE DISPLACEMENT AWAY FROM CENTER)

RADIUS MM	SEMI - DIAGONALS				MEAN
	1	3	2	4	
10	0.5	-0.2	0.5	-0.3	0.1
20	0.7	-1.0	0.7	-1.0	-0.1
30	-0.4	-2.0	0.0	-2.2	-1.1
40	-1.3	-3.3	-1.0	-3.3	-2.2
50	-1.3	-4.9	-1.3	-4.6	-3.0
60	-2.0	-4.9	-1.1	-4.7	-3.1
70	-1.4	-3.8	-1.3	-3.4	-2.4
80	-0.1	-1.6	0.3	-1.3	-0.6
90	1.4	-0.3	1.2	-0.2	0.5
100	1.6	1.0	2.8	1.5	1.7
110	2.5	1.6	3.6	3.1	2.7
120	2.7	2.2	3.0	3.3	2.8
130	1.1	1.7	2.2	3.2	2.0
140	-1.9	0.6	-0.3	1.8	0.0
148	-4.2	-1.9	-1.9	0.1	-1.9

PHOTOGRAPHIC RESOLUTION (LINE PAIRS PER MILLIMETER)

 INTERNATIONAL 3-LINE TEST-CHART, CONTRAST (LOG) : 2.0

APERTURE : 4.0
 FILTER : 450 NM
 FILM : AGFAPAN 25 PROFESSIONAL (ASA SPEED: 25)
 DEVELOPER : AGFA-GEVAERT STUDIOLAL LIQUID 1:15 6 MIN

ANGLE: (DEGREES)	0	5	10	15	20	25	30	35	40	45
RAD.	67	75	74	91	70	68	73	77	65	38
TANG.	67	66	65	62	59	69	71	63	55	38

AWAR (AREA WEIGHTED AVERAGE RESOLUTION) IN LP/MM : 68

MW

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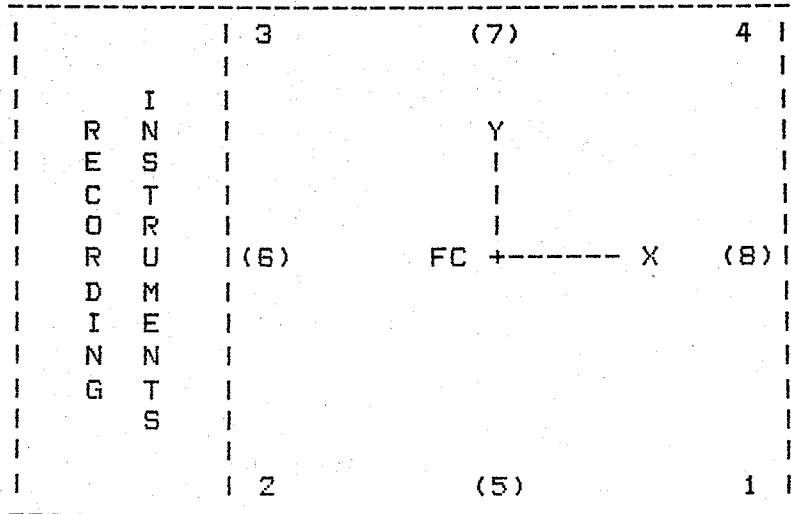
PRINCIPAL POINT OF AUTOCOLLIMATION (PPA) AND
PRINCIPAL POINT OF SYMMETRY (PPS)

REFERRED TO FC, SEE DIAGRAM

	X (MM)	Y (MM)
PPA	0.001	0.003
S	0.003	-0.003

FIDUCIAL MARKS, REFERRED TO FC

	X (MM)	Y (MM)		X (MM)	Y (MM)
1	106.000	-106.001	5	0.006	-110.003
2	-106.004	-106.003	6	-109.992	0.003
3	-105.997	105.998	7	-0.002	109.997
4	105.996	105.995	8	109.986	-0.001



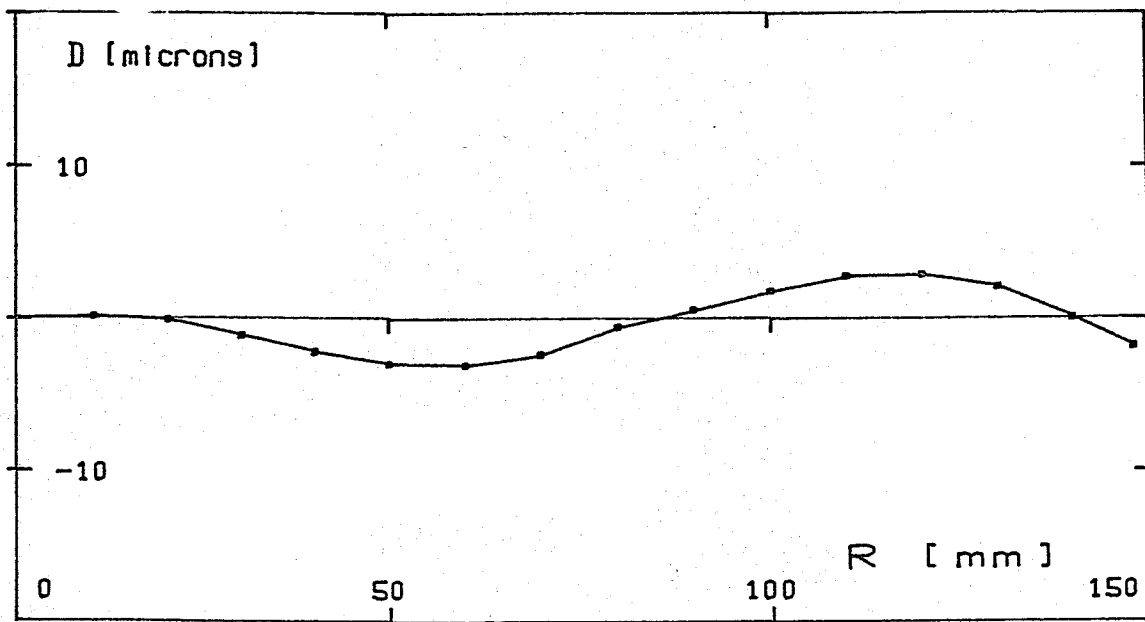
AS SEEN ON FOCAL PLANE FRAME

Mu.

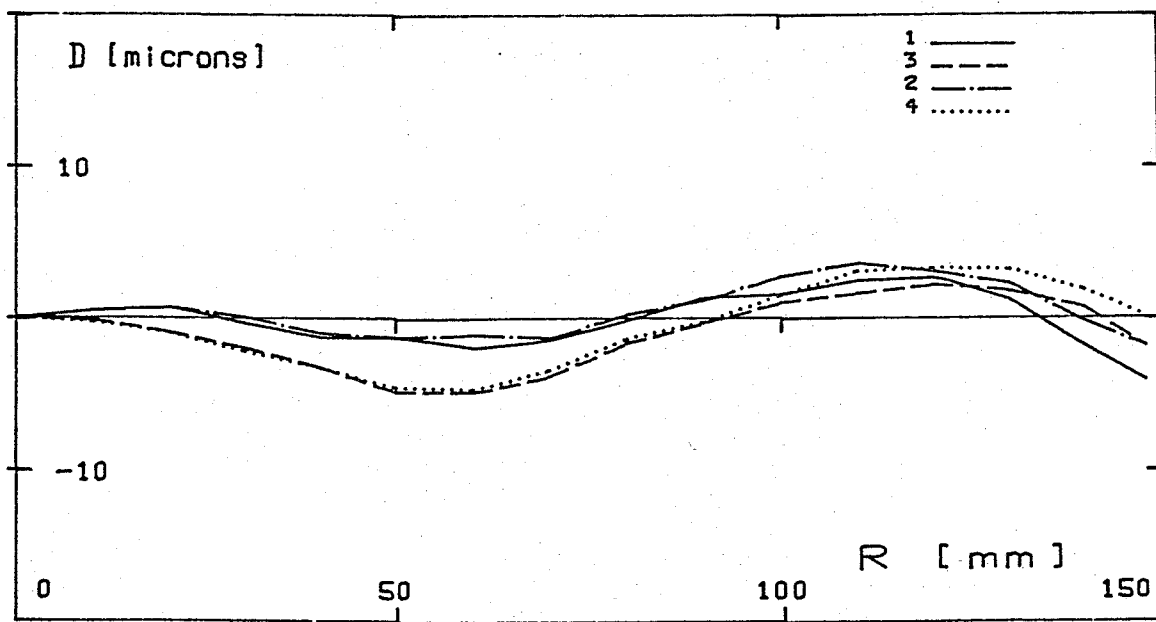
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APERTURE : F / 4.0
FILTER ON GONIOMETER : UIS (400 - 700 NM)
FILTER ON CAMERA : --
C.F.L : 153.18 MM



MEAN RADIAL DISTORTION CURVE



RADIAL DISTORTION FOR SEMI-DIAGONALS REFERRED TO PPS

Handwritten mark