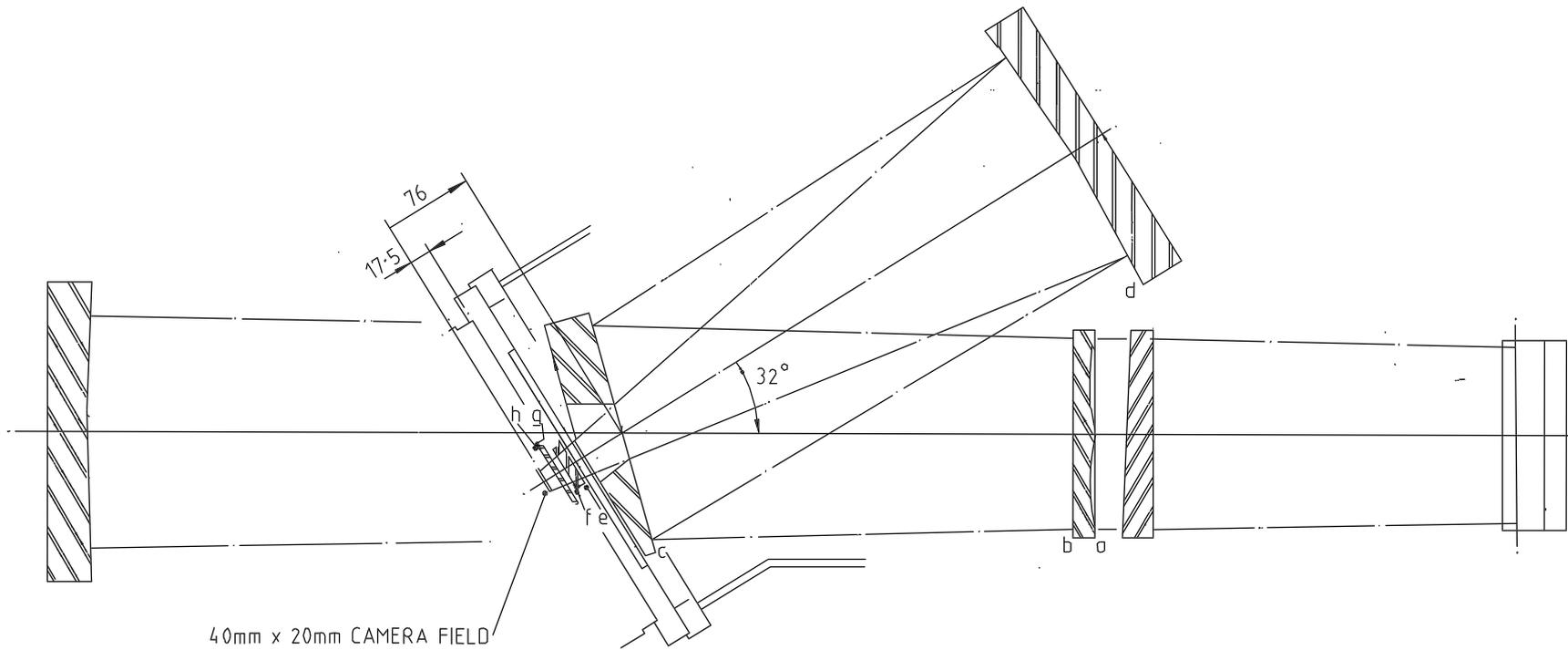


Drawing No. SHT 3 OF 4  
W/GA/000

SURFACE	RADIUS OF CURVATURE	AXIAL SEPARATION	MATERIAL	CLEAR APERTURE
		362 FROM GRATING	AIR	
a	40323	16	FUSED SILICA	230 x 165
b	PLANE ASPHERIC			
		389.4	AIR	
c	PLANE FOLDING MIRROR	(846.3)		
		456.9	AIR	
d	1066.6 SPHERICAL MIRROR			300 x 200
		504.9	AIR	
e	172.1	10.17	FUSED SILICA	55 x 30
f	-3394.4			
		13.8	AIR	
g	PLANE WINDOW	4	FUSED SILICA	
h	PLANE			



Issue	Mod. No.	Date	Drawn By	Issue	Mod. No.	Date	Drawn By
				1		Mar 85	SW/DG

Tolerances (Unless otherwise stated)  
 x ±  
 x.x ±  
 x.xx ±

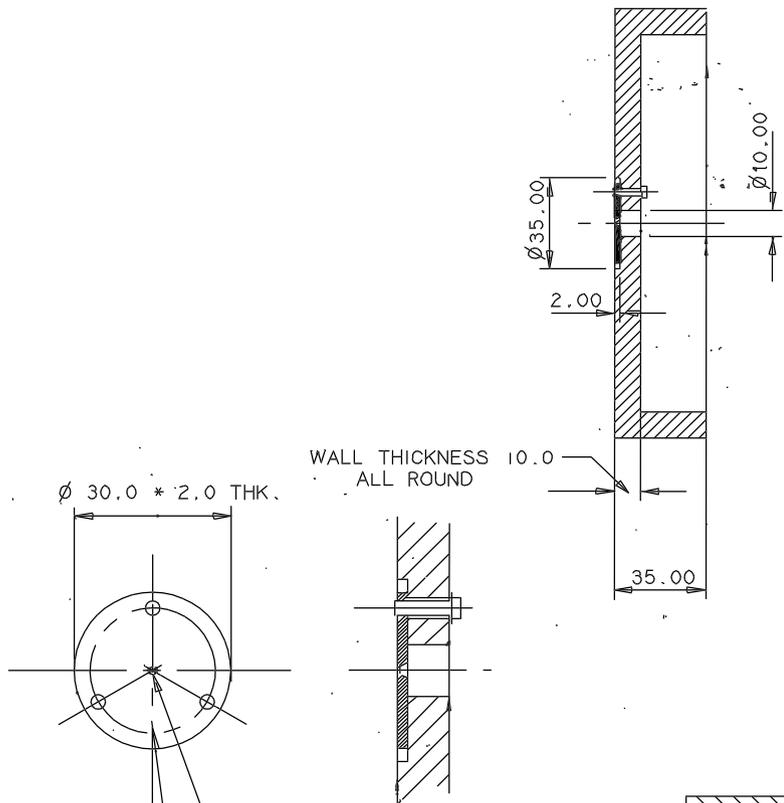
Material	Finish	Drg. No.	No. Req.	Used on

Dimensions in mm. Scale 1:2  
 ROYAL GREENWICH OBSERVATORY,  
 HERSTMONCEUX CASTLE,  
 HAILSHAM SUSSEX.

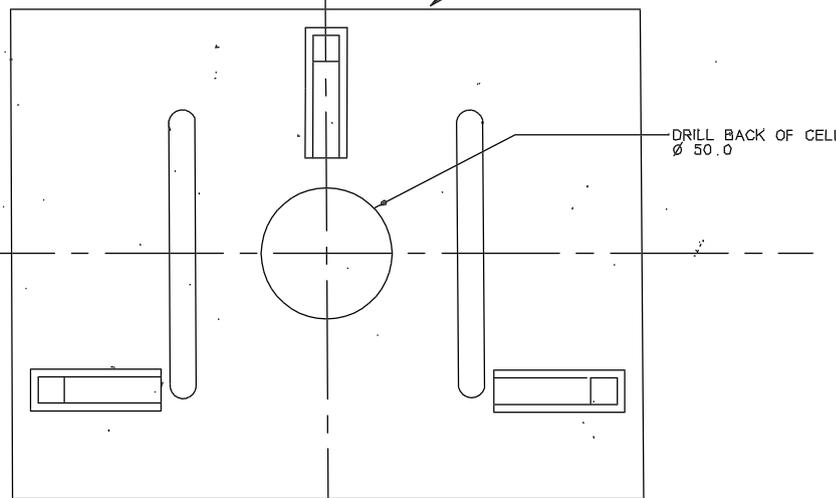
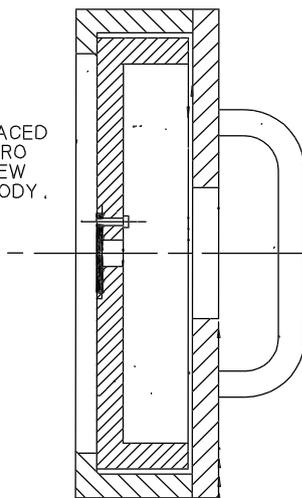
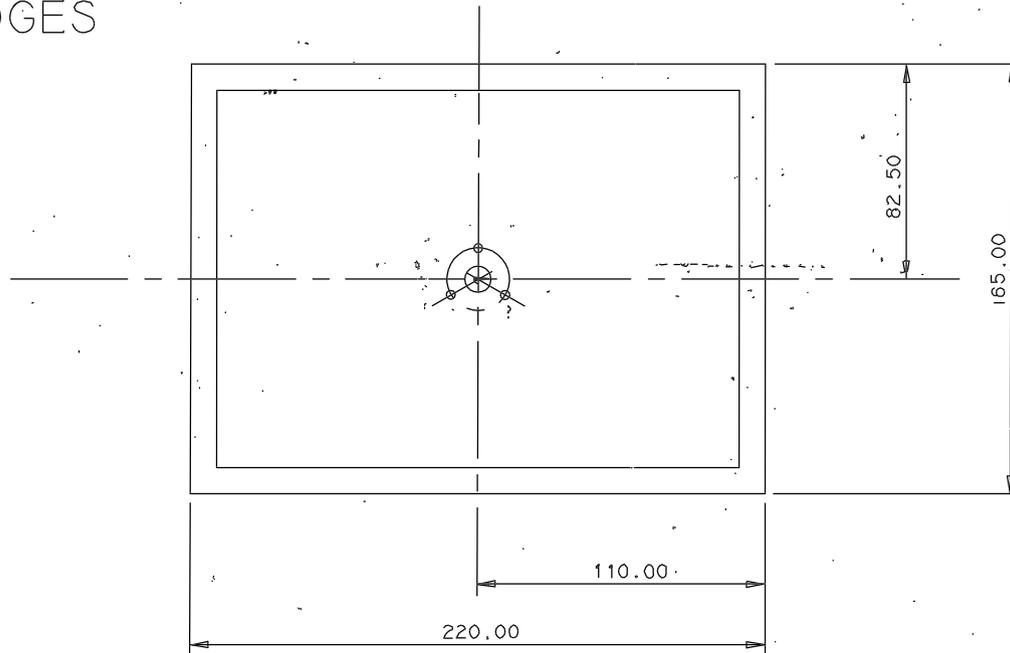
THIRD ANGLE PROJECTION  
 TRS 500 F.L. L.S.T.S. CAMERA SYSTEM  
 (MULTI-BLADE FAST SHUTTER)  
 (BAFFLE SHAPES AND POSITIONS TO BE DETERMINED)

G.A. No.  
 Drawing No. SHT 3 OF 4  
 W/GA/000

REMOVE ALL SHARP EDGES



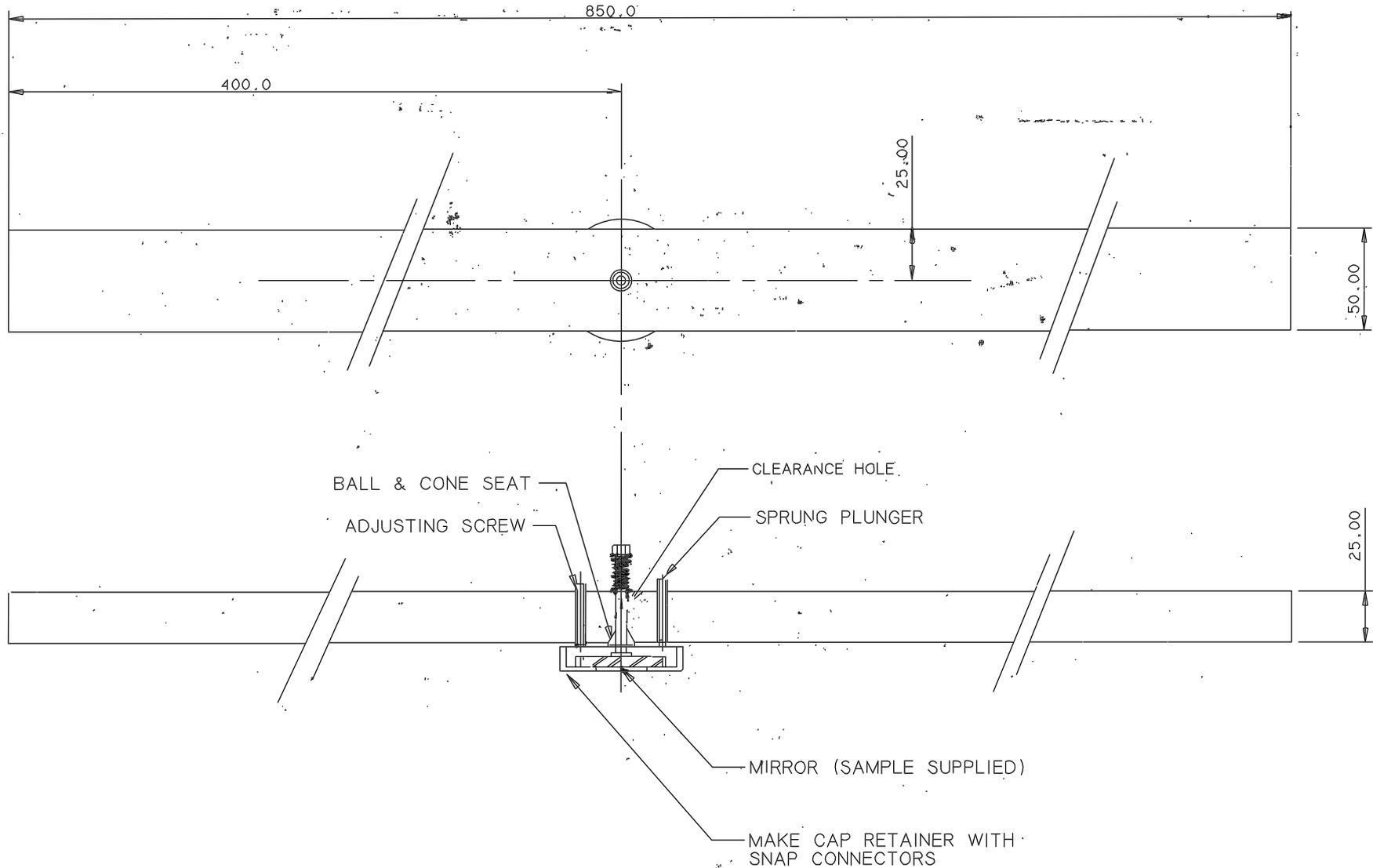
SCALE - \* 2



								Tolerance (Unless otherwise stated)		Material		Dimns. in m.m.		Scale FULL SIZE		THIRD ANGLE PROJECTION		GA No.	
								X +/-		ALUM. ALLOY		1				ROYAL GREENWICH OBSERVATORY		Drawing No.	
								X.X +/-		BRASS		Drg. No.		No. Req.		HERSTMONCEUX CASTLE		W/GJ/200	
								X.XX +/-		BLACK ANODISE AND CLEAN		Used on				HAILSHAM SUSSEX			
Issue	Mod. No.	Date	Drawn by	Issue	Mod. No.	Date	Drawn by							Title "ISIS" SPECTROGRAPH ALIGNMENT GRATING TARGET					
				1		FEB98	DWG												

Drawing No.  
W/GJ/100

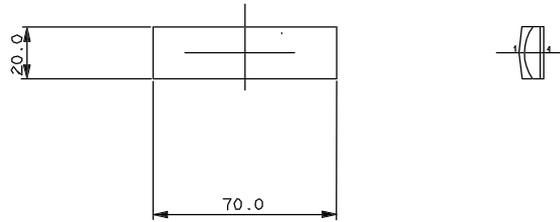
REMOVE ALL SHARP EDGES.



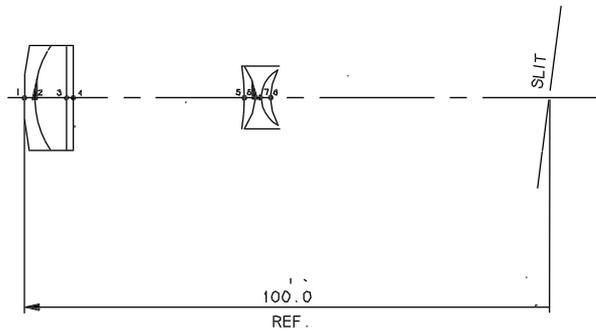
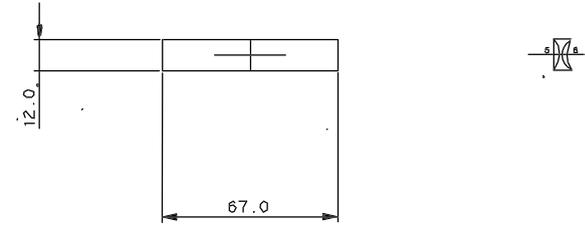
				Tolerance (Unless otherwise stated)				Material		Dimm. in m.m.		Scale FULL SIZE		THIRD ANGLE PROJECTION				GA No.	
				X +/-				ALUM ALLOY		ROYAL GREENWICH OBSERVATORY				Title "ISIS" SPECTROGRAPH ALIGNMENT BRIDGE MIRROR SUPPORT				Drawing No. W/GJ/100	
				X.X +/-				Finish		HERSTMONDCEUX CASTLE		Eng. No. No. Req.							
Issue				Date				CLEAN		HAILSHAM SUSSEX		Used on							

Drawing No.  
W/GA/040

CLEAR APERTURE 63 x 14.2



CLEAR APERTURE 60 x 6.8



COMPLETE SYSTEM  
SCALE 2:1

REMOVE ALL SHARP EDGES - 0.5 x 45° CHAMFER  
FOR ALL OPTICAL DATA CONCERNING THIS LENS SYSTEM  
SEE OPTICAL DATA SHEET

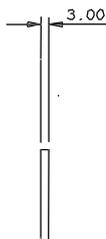
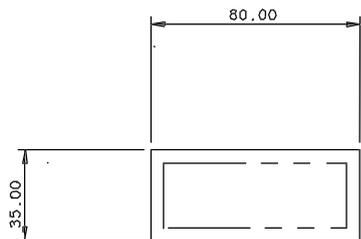
								Tolerance (unless otherwise stated)		Material		Dimns. in m.m.		Scale 1:1		THIRD ANGLE PROJECTION		GA No.	
								X +/-		Finish		ROYAL GREENWICH OBSERVATORY				Title 4.2m ISIS - ANAMORPH ASSEMBLY		Drawing No.	
								X.X +/- 0.3		Used on		HERSTMENCEUX CASTLE				OPTICAL ELEMENTS		W/GA/040	
Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by			HAILSHAM		SUSSEX							





Drawing No.  
W/GA/008-11

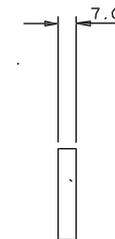
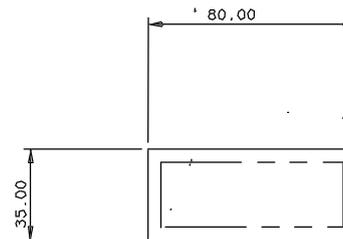
REMOVE ALL SHARP EDGES



CLEAR APERTURE 70 x 25

TITLE		DISC REF.
ND FILTER - RED		
MATERIAL	SCALE	TOLERANCES ±
SEE SPEC.	1:1	X.X +0.5
FINISH	No. RECD. PER UNIT	X.XX -0.0
SEE SPEC.	SEE SPEC.	
G.A. No.	DRAWING No.	
RG0	W/GA/008	

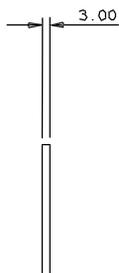
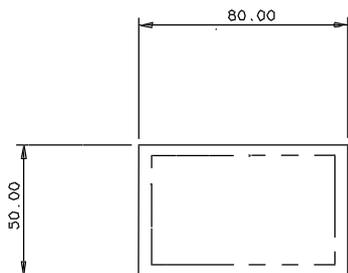
REMOVE ALL SHARP EDGES



CLEAR APERTURE 72 x 27

TITLE		DISC REF.
COLOUR FILTER - RED		
MATERIAL	SCALE	TOLERANCES ±
SEE SPEC.	1:1	X.X +0.5
FINISH	No. RECD. PER UNIT	X.XX -0.0
SEE SPEC.	SEE SPEC.	
G.A. No.	DRAWING No.	
RG0	W/GA/009	

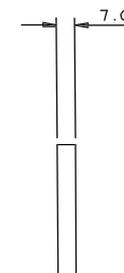
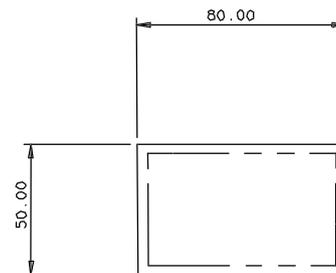
REMOVE ALL SHARP EDGES



CLEAR APERTURE 70 x 42

TITLE		DISC REF.
ND FILTER - RED MULTI-SLIT		
MATERIAL	SCALE	TOLERANCES ±
SEE SPEC.	1:1	X.X +0.5
FINISH	No. RECD. PER UNIT	X.XX -0.0
SEE SPEC.	SEE SPEC.	
G.A. No.	DRAWING No.	
RG0	W/GA/010	

REMOVE ALL SHARP EDGES



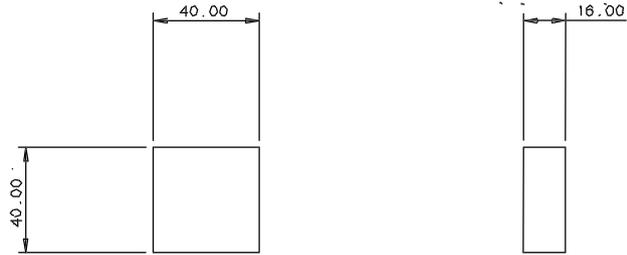
CLEAR APERTURE 72 x 43

TITLE		DISC REF.
COLOUR FILTER - RED MULTI-SLIT		
MATERIAL	SCALE	TOLERANCES ±
SEE SPEC.	1:1	X.X +0.5
FINISH	No. RECD. PER UNIT	X.XX -0.0
SEE SPEC.	SEE SPEC.	
G.A. No.	DRAWING No.	
RG0	W/GA/011	

										Tolerance (Unless otherwise stated)		Material		Dimns. In m.m.		Scale		THIRD ANGLE PROJECTION		GA No.	
										X +/-				ROYAL GREENWICH OBSERVATORY				Title		Drawing No.	
										X.X +/-		Finish		HERSTMONCEUX CASTLE				4.2m ISIS - OPTICAL ELEMENTS		W/GA/008-11	
										X.XX +/-		Used on		HAILSHAM SUSSEX				DETAILS			
Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by	AUG 87 AJW													

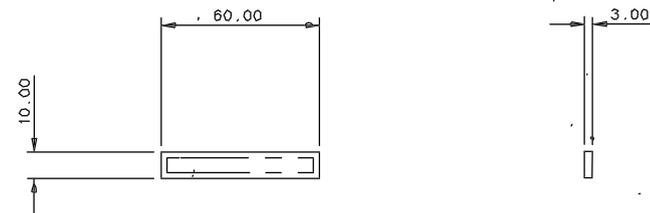
Drawing No.  
W/GA/004-7

REMOVE ALL SHARP EDGES



TITLE		DISC REF.	
WOLLASTON (NICOL) PRISM			
MATERIAL	SCALE	TOLERANCES ±	
SEE SPEC.	1:1	X	+0.5
FINISH	No. REQD. PER UNIT	X.X	-0.0
SEE SPEC.	1 OFF	X.XX	-0.0
G.A. No.	DRAWING No.		
RG0	W/GA/004		

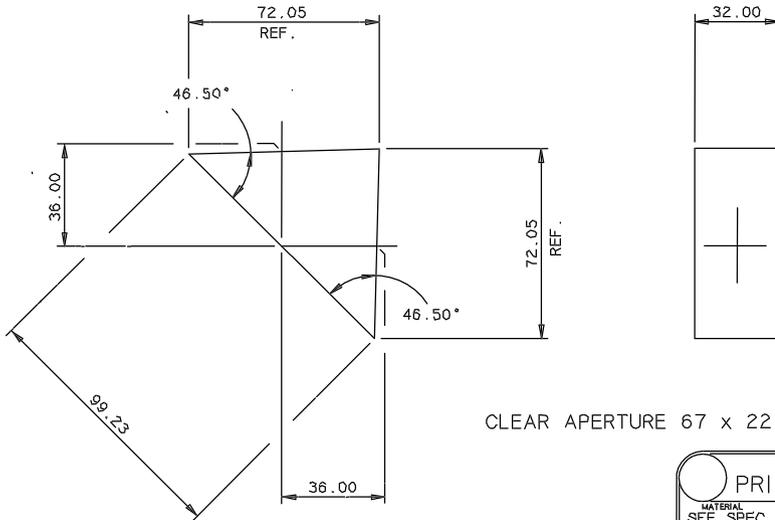
REMOVE ALL SHARP EDGES



CLEAR APERTURE 55.5 x 5.6

TITLE		DISC REF.	
ANAMORPH FIELD LENS			
MATERIAL	SCALE	TOLERANCES ±	
SEE SPEC.	1:1	X	+0.5
FINISH	No. REQD. PER UNIT	X.X	-0.0
SEE SPEC.	1 OFF	X.XX	-0.0
G.A. No.	DRAWING No.		
RG0	W/GA/005		

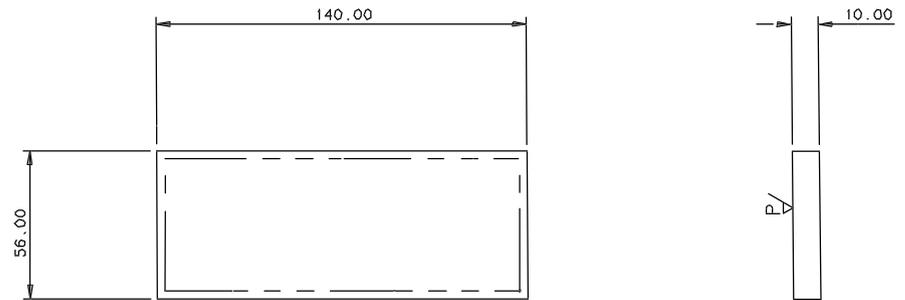
REMOVE ALL SHARP EDGES



CLEAR APERTURE 67 x 22

TITLE		DISC REF.	
PRISM - BLUE FOLD			
MATERIAL	SCALE	TOLERANCES ±	
SEE SPEC	1:1	X	+0.5
FINISH	No. REQD. PER UNIT	X.X	-0.0
SEE SPEC	1 OFF	X.XX	-0.0
G.A. No.	DRAWING No.		
RG0	W/GA/006		

REMOVE ALL SHARP EDGES



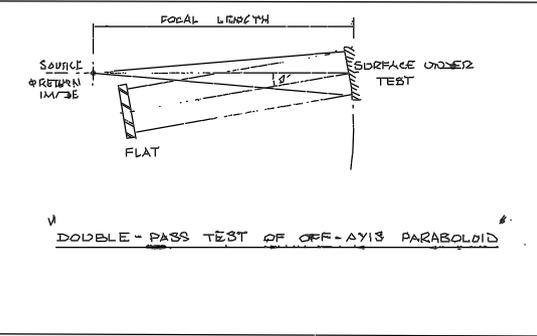
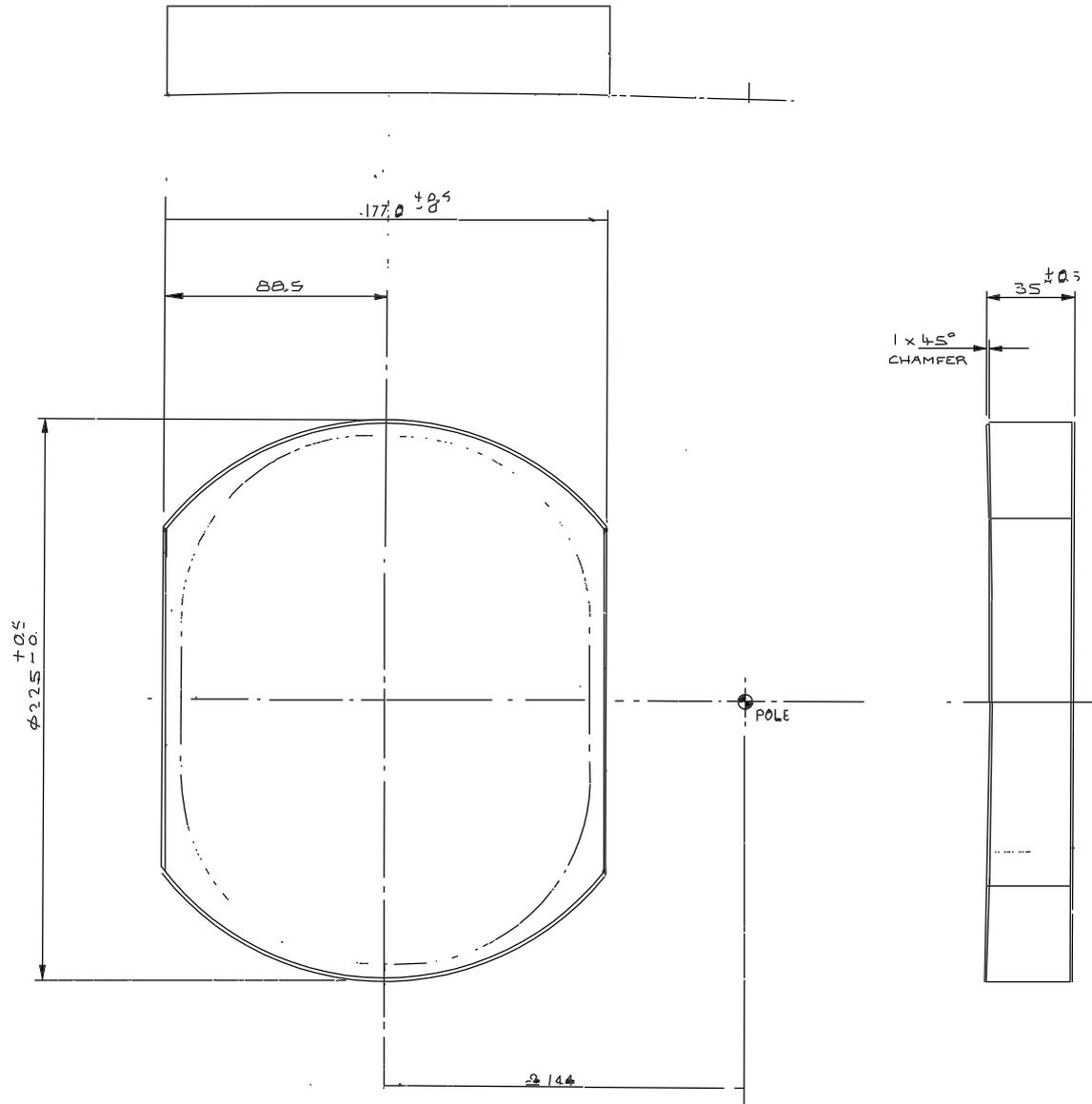
CLEAR APERTURE 134 x 50

NOTE  
0.5 x 45° CHAMFER ON ALL EDGES  
SURFACE MARKED P TO BE OPTICALLY POLISHED TO SPECIFICATION  
ALL OTHER SURFACES TO BE FINE GREY

TITLE		DISC REF.	
MIRROR - RED FOLD			
MATERIAL	SCALE	TOLERANCES ±	
SEE SPEC	1:1	X	+0.5
FINISH	No. REQD. PER UNIT	X.X	-0.0
SEE NOTE	1 OFF	X.XX	-0.0
G.A. No.	DRAWING No.		
RG0	W/GA/007		

				Tolerance (Unless otherwise stated)		Material		Dimns. in m.m.		Scale	THIRD ANGLE PROJECTION		GA No.	
				X +/-		Finish		ROYAL GREENWICH OBSERVATORY		Title		Drawing No.		
				X.X +/-		Org. No.		HERSTMONCEUX CASTLE		4.2m ISIS - OPTICS		W/GA/004-7		
				X.XX +/-		Used on		HAILSHAM SUSSEX		DETAILS				
Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by							
			1			AUG.87	AJW							





DOUBLE-PASS TEST OF OFF-AXIS PARABOLOID

**NOTE**  
 SURFACE FINISH -  $\frac{2}{10}$  MIRROR SURFACE  
 ALL OTHER SURFACES FINE GREY  
 MARK EDGE NEAREST POLE OF MIRROR  
 FOCAL LENGTH 1650 mm  
 CLEAR APERTURE 211 x 162 mm  
 5° OFF AXIS ANGLE  $\pm 0'10''$   
 FOR ALL OTHER DETAILS SEE OPTICAL SPEC.

		2		30.11.84		C. W. B. T.		Tolerances (unless otherwise stated)		Material		ZERODUR		Dimms in m.m.		Scale 1:1		THIRD ANGLE PROJECTION		GA No.			
		1		0-5-84		A. J. W.		X ±		Finish		SEE NOTE		Drg. No.		No. Req.		ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HAILSHAM SUSSEX.		Title 4.2m TELESCOPE ISIS SPECTROGRAPH - 15cm COLLIMATOR MIRROR		Drawing No. W/CA/001	
Issue	Mod. No.	Date	Drawn By	Issue	Mod. No.	Date	Drawn By																







DRAWING NUMBER	No. of Sheets	G.A. Item No.	DRAWING TITLE OR COMPONENT NAME	No. of	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
W/GJ/100	1		BRIDGE MIRROR SUPPORT	1					
/ /									
/ /									
/ /									
/ /									
/ /									
/ /									
/ /									
W/GJ/150	1		FOLDING PRISM/BEAM/COATING TARGETS	1					
/ /			BLUC. CAMERA SYSTEM						
W/GJ/1-1	1		RED CAMERA SYSTEM	1					
/ /									
/ /									
/ /									
/ /									
/ /									
W/GJ/200	1		GRAINING TARGET	1					
/ /									
/ /									
/ /									
/ /									
/ /									
/ /									
/ /									
W/GJ/150	1		CAMERA SPHERICAL MIRROR TARGET	1		ASSY DRG. No.		NOT DRAWN	
/ /									
/ /									
/ /									
/ /									
JOB TITLE: POLARIS						ASSY DRG. No.	SHEET No.	DRAWN BY S. J.	
						100/1	100/1	DATE FEB 85	
ROYAL GREENWICH OBSERVATORY,						HERSTMONCEUX CASTLE,	HAILSHAM,	SUSSEX	



DRAWING NUMBER	No. of Sheets	G.A. Item No.	DRAWING TITLE OR COMPONENT NAME	No.	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
W/C/A/000	4	SHT.1	SPECTROGRAPH OPTICS TABLE.	1		REQUIRED TO A3	AUG. 84	DWG/SW.	
" / " / "	"	SHT.2	CAMERA SYSTEMS.	1		" " "	OCT. 84	DWG/SW.	
" / " / "	"	SHT.3							
" / " / X	"	SHT.4	SPD SL. CAMERA DATA SHEET.				MARCH 84	DWG/SW	
V/GA/001	1		COLLIMATOR MIRROR BEAMSPLITTER,	1	PEROSUVE		30/11/84	CW/ASW	
V/GA/002	1		SPD SL. CAMERA ELEMENTS,	1	STATED		SEPT. 85,		
V/GA/000	1	SHT.5	CNTY. OF GRAVITY DATA SHT. ISIS+FOSL	1	LOC GISIS				
V/GA/000	1	SHT.6	ASSEMBLY DRG. OF ISIS AND FOSL	1	AOGAISIS				
/									
W/GA/004	}		WOLLASTON (NIGOL) PRISM	1		NOT REQUIRED			
/ 005			ANAMORPH FIELD LENS	1					
/ 006			PRISM - BLUE FOLD	1					
/ 007			MIRROR - RED FOLD	1					
W/GA/008	}		ND FILTER - RED		SEE SPEC.				
/ 009			COLOUR FILTER - RED		"				
/ 010			ND FILTER - RED MULTI-SLIT		"				
/ 011			COLOUR FILTER - RED MULTI-SLIT		"				
W/GA/012	}		ND FILTER - BLUE		"				
/ 013			COLOUR FILTER - BLUE		"				
/ 014			ND FILTER - BLUE MULTI-SLIT		"				
/ 015			COLOUR FILTER - BLUE MULTI-SLIT		"				
/									
W/GA/017			BLUE CRISM	1	SEE SPEC.		JUNE 83	DWG/SW	
W/GA/018			RED CRISM	1	"		"	"	
/									
W/GA/020	1		500/6" 1.25" CAMERA - 1651 COMPONENTS	1		FILED ON DWG. DISK AS 500/6	JAN. 83	SW/DWG	
/   21									
/   22									
/   23									
/   24									
W/GA/025	1		CAMERA SPHERICAL MIRROR COATING TOOLING PLATE	1					
W/GA/026	1		" COATING FLAT COATING TOOLING PLATE	1					
W/GA/027	1		" ASPHERIC FLAT " "	1					
W/GA/028	1		COATING FLAT " "	1					
W/GA/029	1		COLLIMATOR MIRROR " "	1					
/									
JOB TITLE						ASSY DRG. No.	SHEET No.	DRAWN BY	
4.2m ISIS OPTICS						1 / 1	1 of 2	OATE	
ROYAL GREENWICH OBSERVATORY,			HERSTMENCEUX CASTLE,			HAILSHAM,		SUSSEX	