REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

1 inch

THIRD ANGLE PROJECTION

ITEM	QTY	PART NUMBER	NOMENCLATURE	MATERIAL SPECIFICATION

TOLERANCES (EXCEPT AS SPECIFIED) FRACTIONS ± | DECIMALS ± | ANGLES
XX ±1/64 | .X ±.1 | ±60'
XXX ±.005 | .XX ±.01
SURFACE FINISH
SURFACE TREATMENT
MASS

DO NOT SCALE DRAWING
ENGLISH DRAWING
UNITS: Inches
INTERPRET PER ANSI Y14.5-1982
WELDING SYMBOLS PER ANSI/AWS A2.4-79

APPROVALS	DATE
DRAWN	
CHECKED	
ISSUED	

Experimental Astrophysics Group
UNIVERSITY OF CALIFORNIA, BERKELEY, USA

DWG TITLE

SIZE B | PROGRAM | DWG NO. | REV
SCALE | SHEET 1 OF

NEXT ASSY | USED ON
FINISH | DEBURR
FOR ASSY | APPLICATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	BASELINE RELEASE	12/5/97	
B	MISC. CHANGES	1/10/98	

1 inch

SEE NOTE 9 — SEE NOTE 8

CABLE ASSY	QTY. (REF.)	FUNCTION	VAC.	LENGTH FT.	PART	DESCRIPTION, SPECIFICATION	NOTES
A	16	ANODE SIGNALS	YES	.5	A1	MICRODOT COAX PLUG	DO NOT USE BLACK NEOPRENE BOOT
					A2	SMC COAX CABLE PLUG, RIGHT ANGLE	DRILL VENT HOLE IN CIRCULAR CAP
					A3	RG 196 COAX CABLE	
B	12	AMPLIFIER SIGNALS	YES	6 ±1/16"	B1	SMA COAX PLUG, STRAIGHT	
					B2	SMA COAX PLUG, STRAIGHT	
					B3	RG 188 COAX CABLE	WITHIN ±1/16" OF EACH OTHER, BEST EFFORT
C	2	HVPS POWER, CONTROL	YES	6	C1	D9 (PINS), GOLD/BRASS SHELL	GOLD/BRASS OR SS JACK POST ASSY'S, NO BACKSHELL
					C2	D9 (SOCKETS), GOLD/BRASS SHELL	GOLD/BRASS OR SS JACK POST ASSY'S, NO BACKSHELL
					C3	8X #22 TEFLON HOOK-UP WIRE	
					C4	1X RG 188 COAX CABLE	
					C5	SHIELD, TIN/COPPER	
D	2	AMPLIFIER POWER	YES	6	D1	HD15 (PINS), GOLD/BRASS SHELL	GOLD/BRASS OR SS JACK POST ASSY'S, NO BACKSHELL
					D2	D15 (SOCKETS), GOLD/BRASS SHELL	GOLD/BRASS OR SS JACK POST ASSY'S, NO BACKSHELL
					D3	15X #22 TEFLON HOOK-UP WIRE	
					D4	SHIELD, TIN/COPPER	
E	2	NIM HVPS HV	YES	6	E1	REYNOLDS 730 HV PLUG	SEE DETAIL A, BOND WITH VAC. COMPAT. RTV
					E2	SHV HV COAX PLUG	
					E3	RG58/C COAX CABLE	STRIP PVC JACKET
F	12	AMPLIFIER SIGNALS	NO	20 ±1/8"	F1	SMA COAX CABLE PLUG, STRAIGHT	
					F2	SMA COAX CABLE PLUG, STRAIGHT	
					F3	RG 188 COAX CABLE	WITHIN ±1/8" OF EACH OTHER, BEST EFFORT
G	2	HVPS POWER, CONTROL	NO	20	G1	D9 (PINS), STEEL SHELL	JACK POST ASSY'S AND BACKSHELL, PLATED O.K.
					G2	10X BANANA JACKS	LABEL BY FUNCTION
					G3	8X #22 TEFLON HOOK-UP WIRE	
					G4	1X RG 188 COAX CABLE	
					G5	SHIELD, TIN/COPPER	
					G6	1/2" BLACK POLYESTER SLEEVE	
H	2	AMPLIFIER POWER	NO	20	H1	D15 (PINS), STEEL SHELL	JACK POST ASSY'S AND BACKSHELL, PLATED O.K.
					H2	3X BANANA JACKS, 1X BNC COAX PLUG	LABEL BY FUNCTION
					H3	3X #22 TEFLON HOOK-UP WIRE	
					H4	1X RG 188 COAX CABLE	
					H5	SHIELD, TIN/COPPER	
					H6	1/2" BLACK POLYESTER SLEEVE	
I	2	NIM HVPS HV	NO	20	I1	SHV HV COAX PLUG	
					I2	10 KV LONG NOSE, KINGS P/N 1065-1	
					I3	RG58/C COAX CABLE	DO NOT STRIP PVC JACKET

SIZE B | SHEET 3 OF 3 | DWG NO. 8226-A3 | REV B

SELECT THIS TEXT (IT BELONGS WITH A BLOCK OF ATTRIBUTES)
WITH 'DDATTE' TO INSERT TEXT INTO THE TITLEBLOCKS

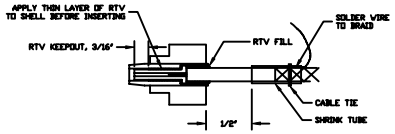
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	BASELINE RELEASE	12/5/97	
B	MISC. CHANGES	1/10/98	

NOTES (UNLESS SPECIFIED OTHERWISE):

1. FOLLOW MANUFACTURER'S ASSEMBLY INSTRUCTIONS WHERE AVAILABLE.
2. TEST CABLES AFTER ASSEMBLY WITH OHMMETER.
3. FOR 20' COAX ASSEMBLIES, LAYOUT WIRE ONTO PAPER OR OTHER CLEAN SURFACE WHEN MEASURING FOR PROPER LENGTH.
4. PROVIDE .040" VENT HOLE IN CONNECTOR.
5. USE GOLD/BRASS OR SS JACKPOSTS/SCREWS FOR VACUUM D CONNECTORS. DO NOT USE BACKSHELLS.
6. USE BACKSHELLS, JACKPOSTS/SCREWS FOR NON-VACUUM CABLES. CADMIUM OR ZINC PLATED PARTS O.K.
7. DO NOT USE SUPPLIED BLACK NEOPRENE BOOT FOR STRAIN RELIEF. USE APPROPRIATE SHRINK TUBING.
8. CABLE LENGTHS MAY BE PRE-CUT, SEE WORK ORDER. TOLERANCES REFER TO DIFFERENCES BETWEEN CABLE LENGTHS.
9. SEE WORK ORDER FOR SPECIFIC QUANTITIES TO FABRICATE.
10. THIS DWG. DOES NOT INCLUDE CABLES FOR FRONT COVER OPERATION.

VACUUM CABLE HANDLING, ASSEMBLY, CLEANING

1. HANDLE PARTS WITH GLOVES AT ALL TIMES.
2. WORK ON A CLEAN SURFACE.
3. USE VACUUM COMPATIBLE MATERIALS (SHRINK TUBING, LACING TAPE, CABLE TIES, ETC.) UNLESS SPECIFICALLY SUPPLIED OR APPROVED OTHERWISE.
4. C, D CABLES: WIRES ARE TO BE INDIVIDUALLY WIPED DOWN WITH ALCOHOL PRIOR TO INSERTION INTO GROUND BRAID.
5. C, D CABLES: GROUND BRAID IS TO BE ULTRASONICALLY CLEANED IN ALCOHOL PRIOR TO INSTALLATION INTO HARNESS.
6. CLEAN FLUX FROM SOLDER JOINTS IMMEDIATELY FOLLOWING SOLDER.



DETAIL A

CONNECTOR E1 ASSY

1 inch

THIRD ANGLE PROJECTION

ITEM	QTY	PART NUMBER	NOMENCLATURE (HARNESS FUNCTION)	MATERIAL SPECIFICATION
1				

TOLERANCES (EXCEPT AS SPECIFIED) FRACTIONS ± | DECIMALS ± | ANGLES
XX ±1/64 | .X ±.1 | ±60'
XXX ±.005 | .XX ±.01
SURFACE FINISH
SURFACE TREATMENT
MASS

DO NOT SCALE DRAWING
ENGLISH DRAWING
UNITS: Inches
INTERPRET PER ANSI Y14.5-1982
WELDING SYMBOLS PER ANSI/AWS A2.4-79

APPROVALS	DATE
DRAWN J. STOCK	12/5/97
CHECKED	
ISSUED J. STOCK	12/5/97

Experimental Astrophysics Group
UNIVERSITY OF CALIFORNIA, BERKELEY, USA

DWG TITLE
CSL GSE CABLES
SI DETECTOR

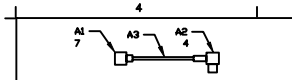
SIZE B | PROGRAM IMAGE | DWG NO. 8226-A3 | REV B
SCALE | SHEET 1 OF 3

NEXT ASSY | USED ON
FINISH | DEBURR
FOR ASSY | APPLICATION

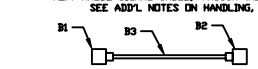
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	BASELINE RELEASE	12/5/97	
B	MISC. CHANGES	1/10/98	

1 inch

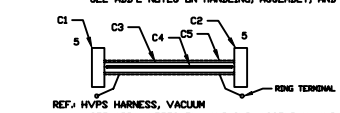
VACUUM CABLES ← | NON-VACUUM CABLES →



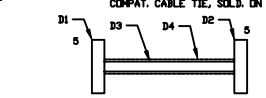
REF: ANODE SIGNAL CABLE, VACUUM (NOT CSL I/F)
SEE ADD'L NOTES ON HANDLING, ASSEMBLY, AND CLEANING.



REF: AMPLIFIER SIGNAL CABLE, VACUUM
SEE ADD'L NOTES ON HANDLING, ASSEMBLY, AND CLEANING.

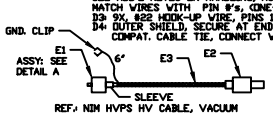


REF: HVPS HARNESS, VACUUM
SEE ADD'L NOTES ON HANDLING, ASSEMBLY, AND CLEANING.
MATCH WIRES WITH PIN #'s, (ONE-TO-ONE)
C3: 8X, #22 HOOK-UP WIRE.
C4: PIN 3 ONLY, RG188, CONNECT SHIELD TO OUTER SHIELD
C5: OUTER SHIELD, SECURE AT ENDS WITH VACUUM COMPAT. CABLE TIE, SOLD. ON WIRE WITH RING TERM., BOTH ENDS.



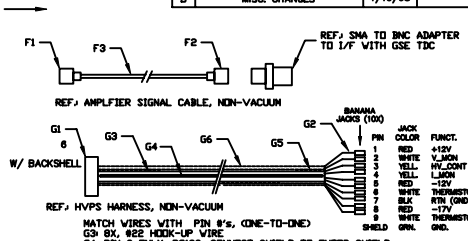
REF: AMPLIFIER HARNESS, VACUUM

SEE ADD'L NOTES ON HANDLING, ASSEMBLY, AND CLEANING.
MATCH WIRES WITH PIN #'s, (ONE-TO-ONE)
D3: 9X, #22 HOOK-UP WIRE, PINS 1,2,3,4,5,12,13,14,15
D4: OUTER SHIELD, SECURE AT ENDS WITH VACUUM COMPAT. CABLE TIE, CONNECT WITH WIRE TO PIN 3, BOTH ENDS.



REF: NIM HVPS HV CABLE, VACUUM

SEE ADD'L NOTES ON HANDLING, ASSEMBLY, AND CLEANING.
E3: STRIP PVC JACKET, CONNECT 6' #16-#18 GROUND WIRE AND CLIP TO BRAID.
E1: USE VACUUM COMPATIBLE RTV (RTV 615 OR EQUIV.) TO BOND TO CABLE. SECURE BRAID AND GROUND WIRE WITH VACUUM COMPATIBLE CABLE TIE AND SHRINK TUBING.



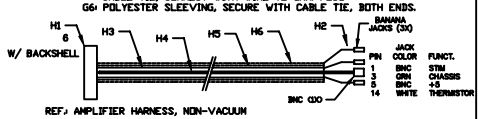
REF: SMA TO BNC ADAPTER TO I/F WITH GSE TDC

REF: AMPLIFIER SIGNAL CABLE, NON-VACUUM

PIN	JACK COLOR	FUNCT.
1	RED	+12V
2	WHITE	V_MON
3	YELL.	HV_CONT
4	YELL.	I_MON
5	RED	-12V
6	WHITE	THERMISTOR
7	BLK	RTN (GND)
8	RED	-17V
9	WHITE	THERMISTOR
SHLD	GRN.	GND.

REF: HVPS HARNESS, NON-VACUUM

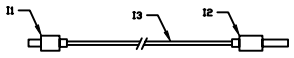
MATCH WIRES WITH PIN #'s, (ONE-TO-ONE)
G3: 8X, #22 HOOK-UP WIRE
G4: PIN 3 ONLY, RG188, CONNECT SHIELD TO OUTER SHIELD.
G5: OUTER SHIELD, SECURE AT ENDS WITH CABLE TIE, CONNECT WITH WIRE TO GRN. PLUG
G6: POLYESTER SLEEVING, SECURE WITH CABLE TIE, BOTH ENDS.



PIN	JACK COLOR	FUNCT.
1	BNC	STM
3	GRN	CHASSIS
5	BNC	+5
14	WHITE	THERMISTOR

REF: AMPLIFIER HARNESS, NON-VACUUM

MATCH WIRES WITH PIN #'s, (ONE-TO-ONE)
H3: 3X, #22 HOOK-UP WIRE, PINS 3,3,14
H4: PIN 1 ONLY, RG188, CONNECT SHIELD TO OUTER SHIELD.
H5: OUTER SHIELD, SECURE AT ENDS WITH CABLE TIE, CONNECT WITH WIRE TO PIN AND CHASSIS (GRN.) PLUG.
H6: POLYESTER SLEEVING, SECURE WITH CABLE TIE, BOTH ENDS.



REF: NIM HVPS HV CABLE, NON-VACUUM
I3: DO NOT STRIP PVC JACKET.

SIZE B | SHEET 2 OF 3 | DWG NO. 8226-A3 | REV B