

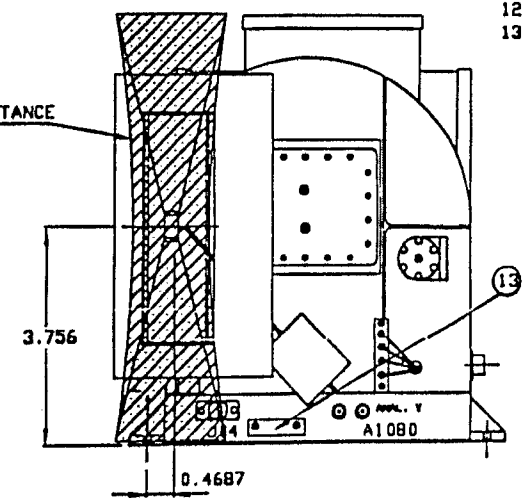
MASS, CENTER OF MASS, MOMENTS OF INERTIA  
SEE SIIS CHAPTER 3.1

MATERIAL : MOST METAL PARTS 7075-T6 ALUMINUM

J01 POWER INTERFACE (G311P10B-1P-B12)  
J02 CLDH INTERFACE (G311P10B-4P-B12)  
J03 PYRO INTERFACE (G311P10B-1P-B12)  
J04 TEST INTERFACE (MDM-15PSB-A175)

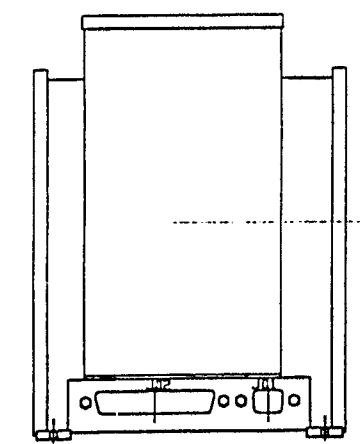
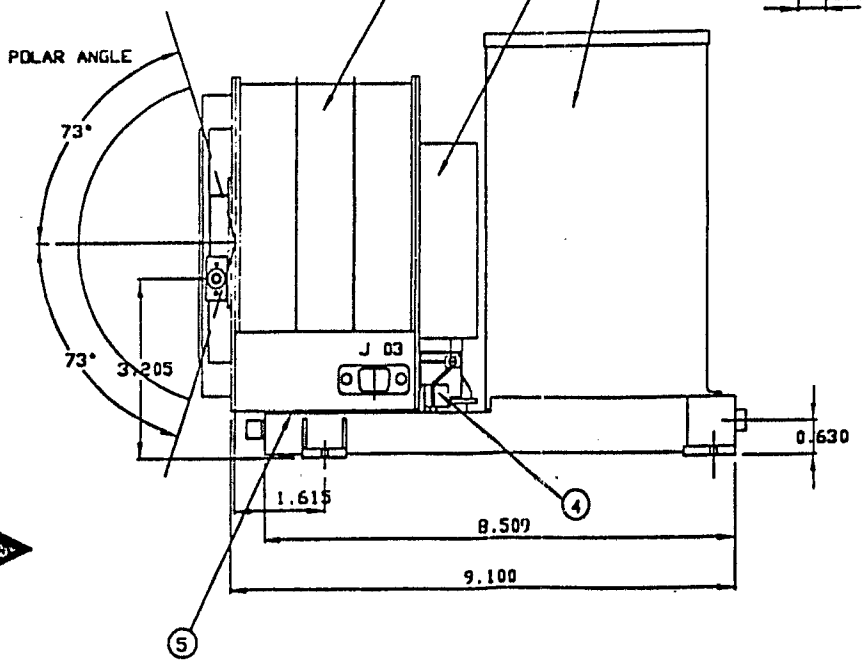
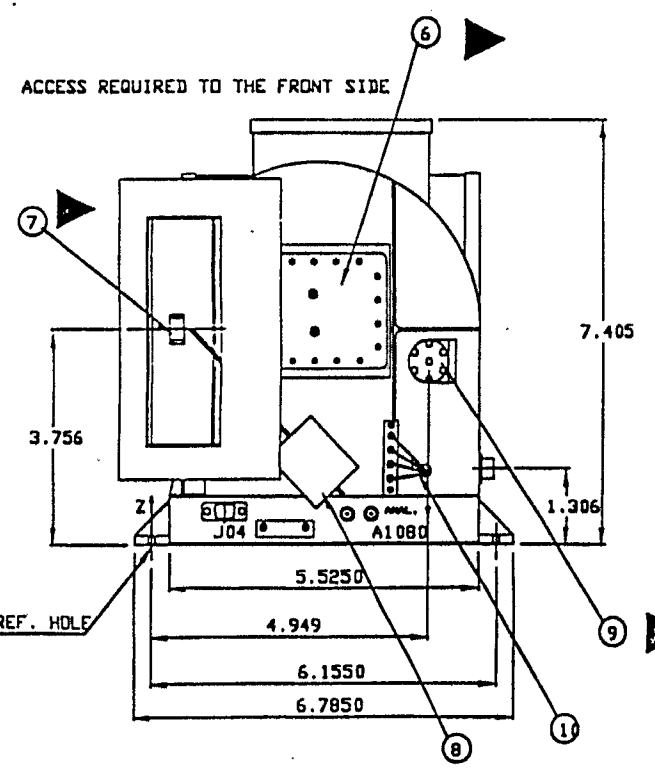
- 1 SENSOR ASSEMBLY
- 2 AMPLIFIER DISCRIMINATORS
- 3 ELECTRONICS BOX
- 4 HIGH VOLTAGE FILTER
- 5 SENSOR ASSEMBLY EL. INSULATOR
- 6 PUMPOUT BAFFLE BOX
- 7 APERTURE
- 8 COVER RELEASE MECHANISM
- 9 PURGE FITTING
- 10 SQUIB LINES
- 11 LOW VOLTAGE CAVITY
- 12 HIGH VOLTAGE CAVITY
- 13 HIGH VOLTAGE MAKE-BREAK W/COVER

INTERSECTION OF SOLID ANGLE OF ACCEPTANCE  
WITH A CYLINDER V/R=100 MM



▶ RED TAG ITEM.  
ONE RED TAG FOR FOUR ITEMS

MOUNTING HARDWARE  
#10 SCREW  
TORQUE TBD  
MOUNTING PLANE PLANARITY 0.015



LIST OF REVISIONS

ACE REVISION 1. 11 JULY 1994  
1ST ACE ISSUE 23 FEB 1994  
REVISION 3. JUNE 1981  
REVISION 2. 14 JAN 1980  
REVISION 1. 15 OCT 1979  
ORIGINAL 24 JULY 1979

LANL	ACE SWEPAM-E INTERFACE CONTROL DRAWING
	PCN LANL-ACE 001 G
ORIGINATED S.BAME NIS-1 02-23-94 DRAWN P.STIGELL NIS-1 07-11-94	

**SWEPAM PARTICULARS:**

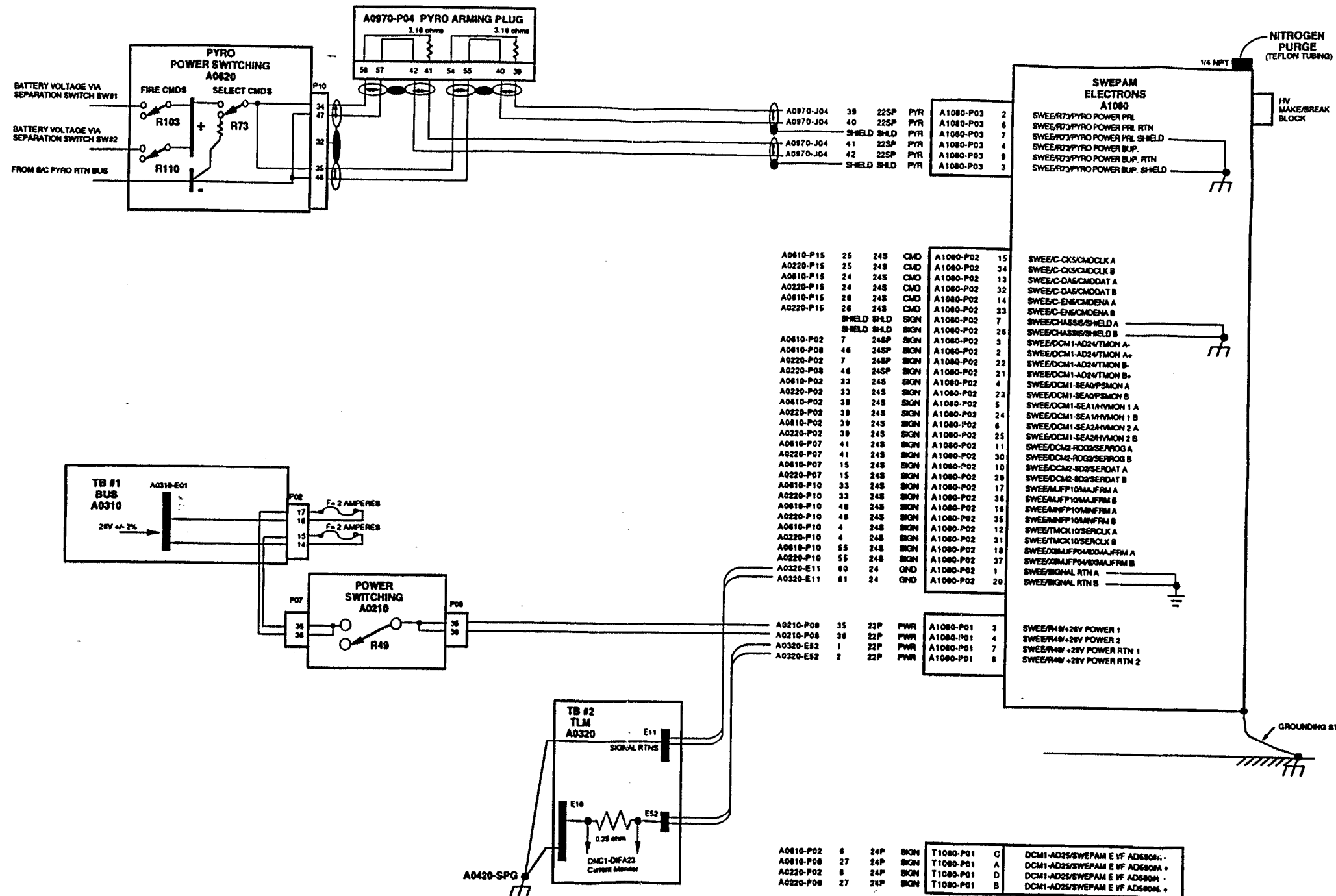
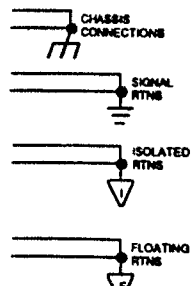
- GROUNDING:**
  - SWEPAM E SECONDARIES ARE ISOLATED FROM CHASSIS AT THE ELECTRONICS ASSEMBLY BUT NOT AT THE SENSOR ASSEMBLY. FOR THAT REASON IT IS IMPERATIVE THAT THE SENSOR ASSEMBLY REMAIN ELECTRICALLY ISOLATED FROM S/C STRUCTURE.
- TEMPERATURE OPERATIONS:**
  - OPERATIONAL SURVIVAL (PWR) SURVIVAL (OFF)
  - SWEPAM E: -20°C to +45°C -25°C to +50°C -30°C to +40°C
- POWER PROFILE:**
  - 3W STEADY STATE CONDITION
- HANDLING:**
  - OUTGAS IN VACUUM ( $\leq 10^{-5}$  TORR) FOR 12 HOURS BEFORE APPLYING HIGH VOLTAGE.
  - REQUIRES HUMIDITY (30% to 70% RH) & TEMPERATURE CONTROLS TO PREVENT CONDENSATION.
  - NO S/C TEST WITH HV TO CEMS OR ANALYZER. HV SHOULD ONLY BE APPLIED TO A DUMMY LOAD.
- ACCESS REQUIREMENTS:**
  - FOR HV MAKE/BREAK PLUG
  - TO INSTALL AND REMOVE THE CEM HV PS DUMMY LOAD????TBR
  - TO INSTALL AND REMOVE THE CHARCOAL FILTER AND TO UNSEAL AND TO RESEAL THE PUMP OUT PORT.
- RADIATION SOURCE:**
  - TBS7777/1 MICROCURIE
- CLEANING AGENT:**
  - ETHYL ALCOHOL IS AN APPROVED CLEANING AGENT ON AND NEAR THE INSTRUMENT.
  - USE OF VOLATILE CHEMICALS NEARBY MUST BE RESTRICTED.
- GREEN & RED TAGGED ITEMS:**
  - GREEN-MATE HV MAKE PLUG PRIOR TO LAUNCH
  - GREEN-TEST CONNECTOR FLIGHT COVERS
  - REMOVAL OF PUMP-OUT PORT & PURGE PORT SEALS????TBR
  - RED- REMOVE HV SAFETY/BREAK PLUG PRIOR TO LAUNCH.
- RELEASE MECHANISM:**
  - USES PYROTECHNICS ELECTROEXPLOSIVES DEVICES TO RELEASE AN APERTURE COVER.
- PURGE REQUIREMENTS:**
  - NITROGEN PURGE REQUIRED UNTIL LAUNCH.
  - USE NITROGEN SPECIFIED AS MAX. 3.0 psi PRESSURE.
  - IN LINE RESTRICTOR WILL REDUCE NITROGEN FLOW RATE TO 0.2 L/min.
- HIGH VOLTAGE EXTREME OF 4000V.**

**C & D ALLOCATIONS:**

- INSTRUMENT DATA - 454 BITS/SEC.**
- TLM DATA:**
  - DCM2-S02 = SCIENCE DATA
  - DCM2-SEA3MAM\_BUS\_V = 28V MAIN BUS VOLTAGE
  - DCM1-AD24/SWEPE\_INT\_T = TMON
  - DCM1-AD25/SWEPE\_INTRF\_T = IF TEMP
  - DCM1-DFA23/SWEPE\_I = SWEPEM E. INPUT CURRENT
  - DCM1-SEA3/SWEPE\_IV = PSMON
  - DCM1-SEA1/SWEPE\_HV1 = HVMON 1
  - DCM1-SEA2/SWEPE\_HV2 = HVMON 2
  - DCM1-S05/SWEPE\_PWR = CMD R44A/B TELLTALE
  - DCM1-S06/SWEPE\_PYRO = CMD R73A/B TELLTALE
  - DCM1-S07/SMAH\_FIRE = CMD R103A/B TELLTALE
  - DCM1-S08/SBACKUP\_FIRE = CMD R110A/B TELLTALE
- COMMANDS:**
  - CMD R44A/B(SWEPE\_PWR\_ON/OFF) = SWEPEM E. TURN ON/OFF
  - CMD R73A/B(SWEPE\_PYRO\_ARM/OFF) = SWEPEM E. PYROTECHNICS ARM
  - CMD R103A/B(SMAH\_FIRE\_ON/OFF) = PYRO FIRE PWR
  - CMD R110A/B(BK\_PYRO\_FIRE\_ON/OFF) = PYRO FIRE RED.
  - DATA-06 = DATA CMD

**EYE:**

- A0810 = C40H A
- A0220 = C40H B



7345-9018 A3

PRELIMINARY

ENGINEER: J.M.ROBERTS	THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
TITLE:	ACE BLOCK DIAGRAM (SWEPAM ELECTRONICS)
SIZE:	100mm x 100mm