

10/93

NASA SMALL SELF-CONTAINED PAYLOAD PROGRAM

GET AWAY SPECIAL

G - _____

PAYLOAD ACCOMMODATIONS REQUIREMENTS

Date

Payload Approval:

Payload Manager

Date _____
Date _____

Customer Contact

Organization

Organization

GSFC Approval:

Technical Manager

GAS Project Manager

Date _____
Date _____

ENCLOSURE 1

NASA SMALL SELF-CONTAINED PAYLOAD (SSCP) PROGRAM

GET AWAY SPECIAL (GAS)

G - _____

PAYLOAD ACCOMMODATIONS REQUIREMENTS (PAR)

1.0 INTRODUCTION

This accommodation plan defines the technical agreement between NASA/Goddard Space Flight Center (GSFC) and the GAS Customer concerning the unique information needed for the preparation, flight, and disposition of this GAS payload. The general plans for handling of GAS payloads are described in the GAS Experimenter Handbook and the Payload Integration Plan (PIP)--Space Transportation System and Get Away Special Carrier (NSTS-44000).

Appropriate information from this accommodation plan will be used for a flight unique appendix to the GAS Carrier/STS PIP and its associated annexes.

By signing this PAR, the Customer Contact and Payload Manager hereby certify that this payload and none of its components as flown on the Shuttle shall be sold, donated, or otherwise transferred for use as a commemorative item or work of art.

2.0 PAYLOAD DESCRIPTION

2.1 Size and Weight

2.2 Experiment Description(s)

2.3 Device Description(s)

2.4 Operational Scenario

3.0 STANDARD SERVICES

3.1 Container Accommodations

3.1.1 Internal Atmosphere

The container will be purged with (Dry Nitrogen or Dry Air) and sealed at one atmosphere pressure prior to installation into the Orbiter.

OR

The container will be evacuated prior to transportation to the Orbiter.

AND/OR

The container will incorporate a filtered relief valve so that it will evacuate during ascent to orbit and will repressurize during reentry and landing.

3.1.2 Insulated End Plate Cover

An insulated end plate cover with a silverized teflon exterior coating will be installed over the container experiment plate exterior.

OR

The experiment mounting plate top surface will be coated with silverized teflon or, (if opening door payload) the Motorized Door Assembly (MDA) upper surfaces will be insulated and covered with Beta cloth.

3.1.3 Battery Box Venting

The battery box in this payload (will/will not) be vented through the upper end plate via two 15 psid pressure relief valves.

3.1.4 Baroswitch

The GCD altitude turn on switch (will/will not) be used to turn on Relay A.

3.2 Flight Operations

3.2.1 Flight Design

NASA will identify a Shuttle flight opportunity appropriate to the following payload requirements and within the constraints of the SSCP queue defined in 14 CFR 1214.905(b).

Orbit:
Altitude -----

Inclination

Orientation:

Stabilization:

Other:

All of the above requirements that cannot be accomplished by NASA within the established plans for the identified flight will be accomplished as optional services delineated in section 4 of this document.

3.2.2 Flight Activity

The assignment of GAS Control Decoder (GCD) relay states to specific payload functions is shown in Table 3.2.2-1. The required payload crew activities during the flight are shown in Table 3.2.2-2. All relay operations beyond the first six (6) will be delineated as optional services in section 4 of this document.

RELAYSTATE PAYLOAD FUNCTIONS

HOT (H)

A_-----

LATENT (L)

HOT

B_-----

LATENT

HOT

C _____

_____ LATENT _____

TABLE 3.2.2-1 - PAYLOAD CONTROL FUNCTIONS FOR G-

3 A
XIR
3 U

THE MINIMUM ACCEPTABLE OPERATING TIME FOR THIS PAYLOAD IS _____ HOURS.

NOTE:

) ALL GCD RELAYS WILL BE IN LATENT STATE AT LAUNCH

TABLE 3.2.2-2--PAYLOAD OPERATIONS PLAN FOR G-_____

3.2.3 Payload Power Contactor (PPC) Malfunction Inputs

If unused, please insert the following: The PPC malfunction inputs are not used. All circuits and experiments are fused.

The two PPC malfunction inputs will be monitoring the following payload parameters:

1. _____

2. _____

3.3 Launch Site Operations

3.3.1 Payload Final Preparation

The customer plans to install the following items into his payload just prior to payload installation into the GAS flight container:

3.3.2 Leak Test Levels

After payload installation, the container (will/will not) be pressurized for the purpose of leak testing. Pressurization of no more than _____psig for no more than _____ hours will be permitted by the customer.

OR

After payload installation and container evacuation the container will be leak tested by checking for vacuum hold for at least 16 hours.

3.4 Safety

3.4.1 Inspection

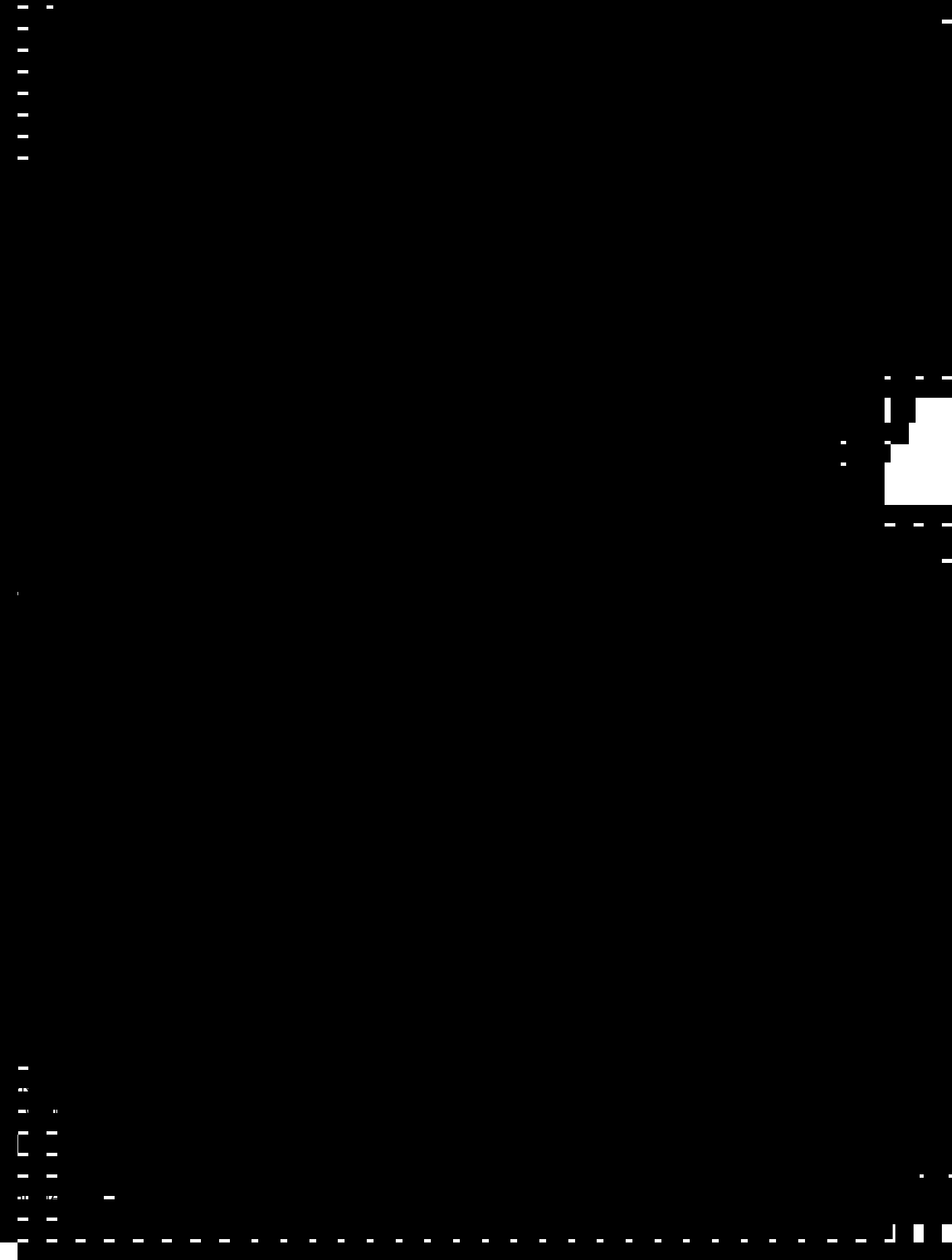
Assemblies which cannot be disassembled or x-rayed during safety inspection at the launch site will be sent to NASA for inspection and sealing prior to shipment of payload. The assemblies will be returned to the customer with an inspection stamp and sealing device. These assemblies will not be further opened by the customer prior to flight. The following assemblies fit this category (if none, write none):

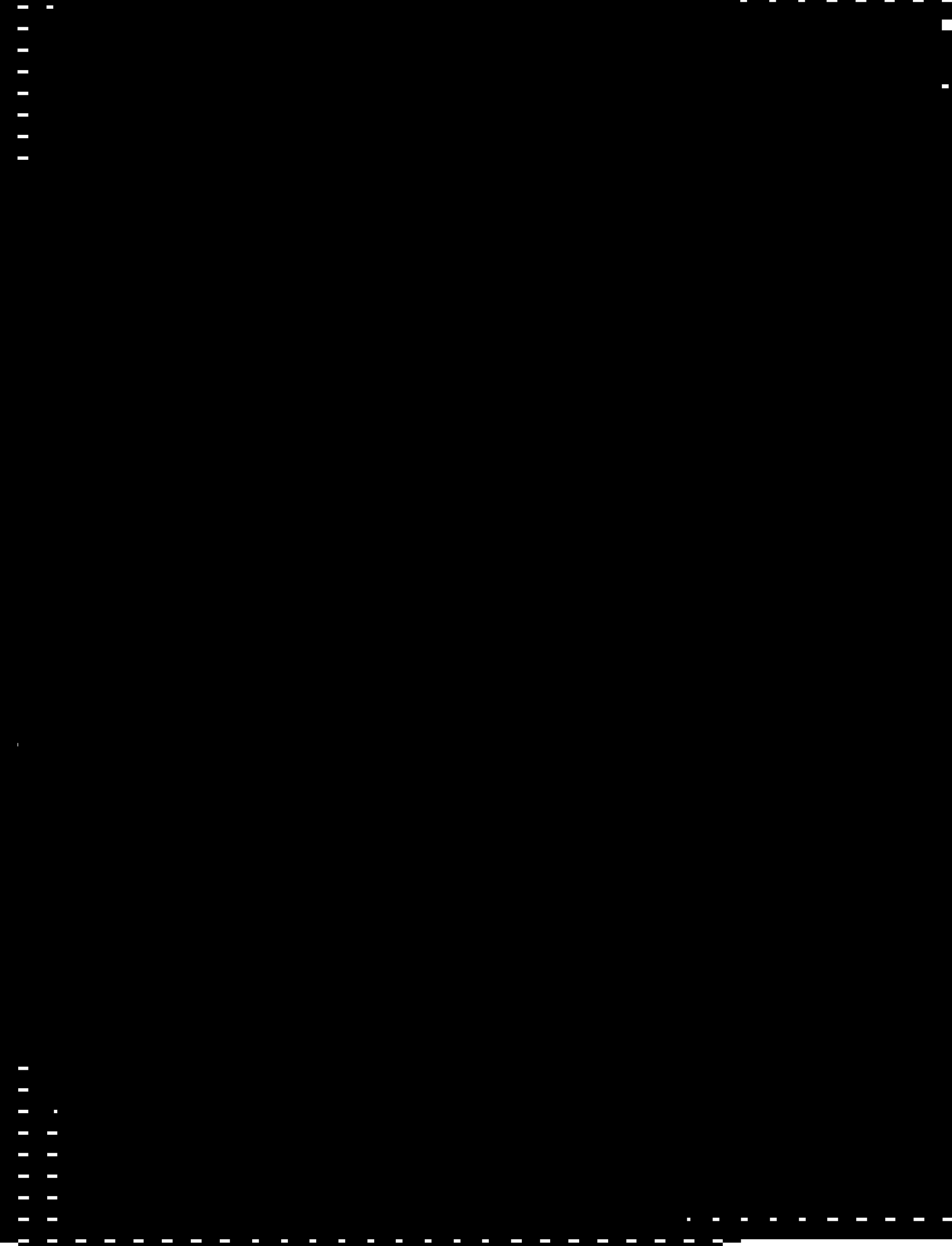
3.4.2 Preliminary Hazard Analysis

Figure 3.4.2-1 is the completed Payload Safety Matrix resulting from a preliminary hazard analysis on this payload. Figure 3.4.2-2 is the associated Hazard List for this payload.

If your Preliminary Safety Data Package (PSDP) is submitted with your PAR, please state here:

The results of a preliminary hazard analysis have been submitted in the preliminary safety data package for this payload. Make a copy of the Figure 3.4.2-1 and 3.4.2-2 to make a payload and GSE Safety Matrix and Hazard Description.





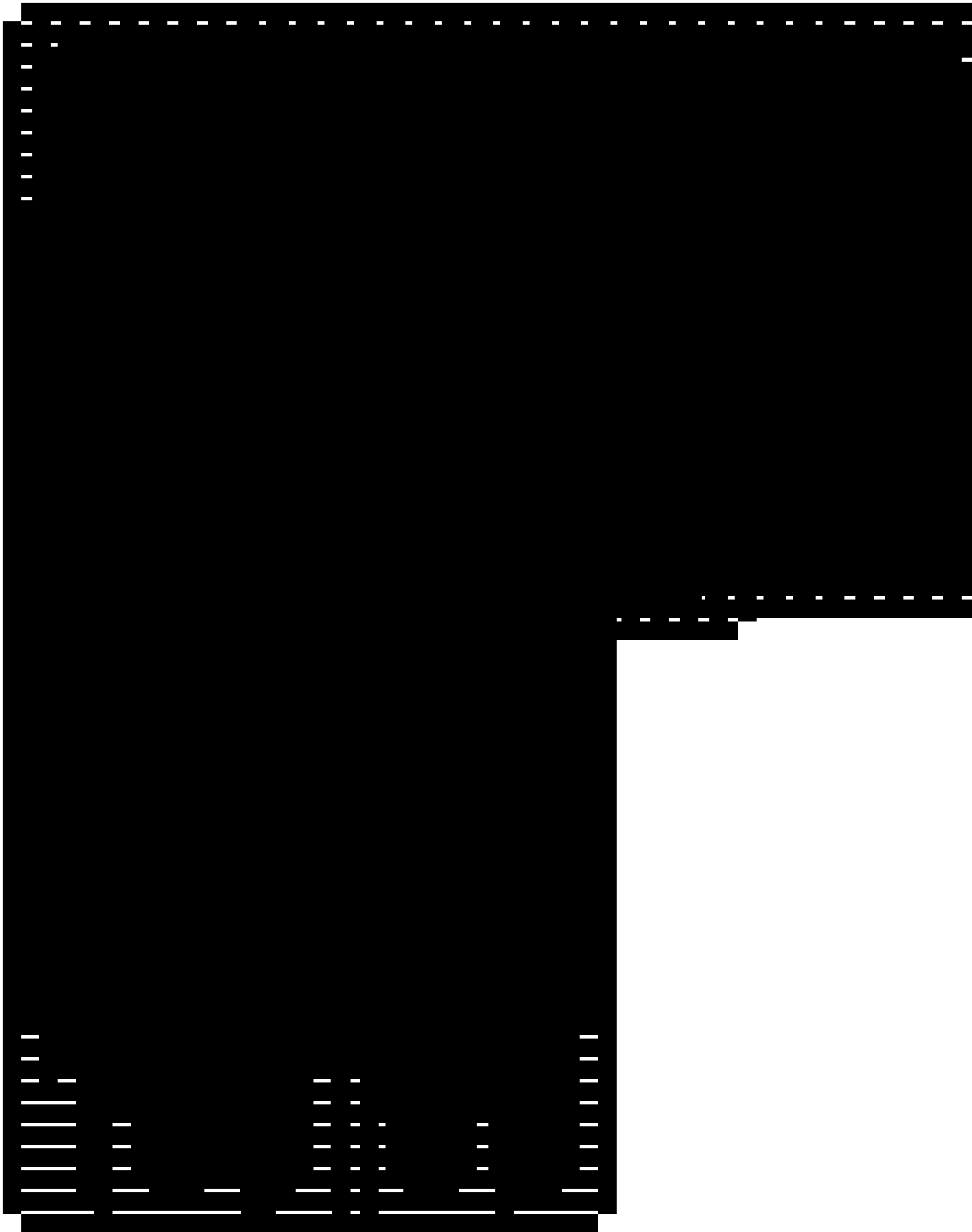




FIGURE 3.4.2-2

3.5 Post Flight Shuttle Mission Data

GSFC will provide the customer with two types of data concerning the Shuttle mission on which this payload has flown:

- a. Mission Elapsed Time (MET) for major attitude holds; with an indication when the Orbiter was pointing at the Earth, Deep Space, or the Sun.
- b. Approximate time (± 10 min.) of GCD relay operations during the mission.

4.0 OPTIONAL SERVICES

All optional services provided by NASA will be at additional cost as negotiated between NASA and the Customer.

4.1 Additional Post-Flight Mission Data

4.2 Optical Window (10 lb. weight penalty)

4.3 Standard Door Assembly (SDA) (40 lb. weight penalty)

4.4 Special Launch Site Support Requirements

5.0 TECHNICAL SUPPORT SERVICES

Technical support services required by GAS users and provided by the GSFC (such as vibration testing, EMI testing, etc.) are provided at extra cost. Costs for these services are negotiated between the GSFC GAS project and the customer and are funded directly to the GSFC as a reimbursable effort.

5.1 The following items fit this category:

6.0 SCHEDULE

Figure 6.0-1 is the milestone schedule for the preparation of this payload. (The milestone schedule for a standard GAS payload is about 13 months. Complex payloads may require more time for NASA to process).

The specification of a launch date on this schedule does not imply an official flight assignment.

FIGURE 6.0-1

MILESTONE SCHEDULE FOR GET AWAY SPECIAL PAYLOAD G-_____

(Fill in dates for your payload)

<u>STANDARD SERVICES</u>	<u>DATE TO BE COMPLETED</u>
COMPLETE PAR AND SEND TO GSFC	L-13 MOS
BASELINE PAR AND DISTRIBUTE	L-11 MOS
CUSTOMER SEND PRELIMINARY SAFETY DATA TO GSFC	L-10 MOS
GSFC COMPLETE PRELIMINARY SAFETY DATA REVIEW	L-10 MOS
CUSTOMER SEND FINAL SAFETY DATA TO GSFC	L-9 MOS
GSFC SEND SHIPPING END PLATE TO CUSTOMER	L-9 MOS
GSFC COMPLETE FINAL SAFETY DATA REVIEW	L-8 MOS
CUSTOMER SEND PHASE III SAFETY DATA TO GSFC	L-7 MOS
GSFC SEND PHASE III SAFETY DATA TO STS	L-6 MOS
GSFC SEND SHIPPING CONTAINER TO CUSTOMER	L-6 MOS
CUSTOMER SEND CLOSED ASSEMBLIES FOR PRESHIP INSPECTION TO GSFC	L- 16 WEEKS
GSFC SEND CLOSED ASSEMBLIES BACK TO CUSTOMER	L-14 WEEKS
PAYLOAD AND CUSTOMER ARRIVES AT LAUNCH SITE	L-90 DAYS
CUSTOMER AND GSFC INSTALL PAYLOAD IN CONTAINER	L-86 DAYS
LAUNCH (EARLIEST LAUNCH TARGET DATE)	L-0 DAYS
CUSTOMER AND GSFC REMOVE PAYLOAD FROM CONTAINER	L+2 WEEKS
CUSTOMER RETURN LOANED HARDWARE TO GSFC MONTH	L+1
GSFC SEND POST-FLIGHT DATE TO CUSTOMER MONTHS	L+2

THE SPECIFICATION OF A LAUNCH DATE ON THIS SCHEDULE DOES NOT IMPLY AN OFFICIAL FLIGHT ASSIGNMENT.