



W. W. Hansen Experimental Physics Laboratory

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Gravity Probe B Relativity Mission

**TRAVEL SHEET & AS-BUILT PROCEDURE
GUIDELINES**

GP-B P0406

Rev. A

October 4, 1999

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Document Revision Record

Document Title: **Travel Sheet and As-Built Procedure Guidelines**

Document Number: P 0406

Released Date: **August 7, 1998**

REV	Date	Authorization for Change - ECO #	Page	Paragraph	Change Description
A	10/04/99	1041	All		Re-written to incorporate As-Built Procedures and redlines.

Travel-sheet guidelines

The following is written to establish common rules for all users of Travel-sheets. These documents will define all operations to be performed and be archived upon completion.

1. Initial Form approval

The travel sheet must be approved prior to use. The last two lines shall include the signature of the RE and QE approval on the 'empty' Travel-sheet.

2. Header:

The headlines shall include the **PART NAME, SERIAL NUMBER OR LDC, DRAWING NUMBER, QUANTITY,** and **PURCHASE ORDER NUMBER** when applicable.

Additional information may be added describing the work to be performed and/or that operations may be worked out of sequence at the discretion of the RE and QE.

3. Columns:

#: Sequential number.

Operation: Description of the operation.

Specification No. & Rev.: Drawing and its revision, specification, Procedure or other documents controlling this operation. When a drawing is called, add the relevant notes when applicable. For procedures, add the relevant paragraph when applicable.

Performed by: the empty Travel-sheet shall include Stanford and/or Vendor responsible for performing the work.

Date Completed: Upon completion of the work the person who performed the operation shall sign his/her name and date.

Inspection & Approval: This column is for the Program Quality Engineer or the Quality Assurance Rep. If there is a **“Q”** in one of the Boxes this is a mandatory inspect point that can only be bought off by a Program QE, either Dorrene Ross or Russ Leese. If there is an **“T”** in any of the boxes it indicates a mandatory inspect point to be bought off by a Quality Assurance Representative.

For operations that do not require any approval, an X or shading should be entered in the empty form. Boxes without the X will have Program QE or QE Rep. stamp (round), and date of approval. *This box can not be signed by the same person who signed the 'Performed by' of this operation.*

Buy off: This column is for the RE buy-off. For operations that do not require this approval, an X or shading should be entered in the empty form. Boxes without the X will have RE stamp (square), only and date of approval.

Remarks/Discrepancies: This column is for special notes, discrepancies discovered during this operation (write the DR # or the D-Log item number) and for ONR comments like “Notify ONR before starting this operation” or “ONR approval is required prior to proceeding to next operation”. Another option for ONR approval is to have it as a separate operation.

Redlines: Note that operations may be changed or added to travel sheets once work has begun. Additions require the approval of the RE and QE via stamps and dates.

It is the responsibility of the QE to verify that travel sheets are closed to released drawings. No travel sheet is to be closed to a redline drawing without approval of the System Effectiveness Manager.

4. Final buy-off

The last two operations should be Final Buy-Off RE, and QA Buy-Off. The buy-off date should be filled in the Date Completed column. RE stamp (square) should be in the Buy-Off column and QE stamp (round) in the Inspection and Approval column.

Partial Travel-sheet, covering only part of the operations, should have in the last operation reference to the next Travel-sheet.

Revisions to Travel Sheets: Note that travel sheets may be revised once work has begun. The existing travel sheet will reflect the addition of the revised travel sheet. Both the existing and revised travel sheet must be approved by the RE and QE.

Archiving of Travel Sheets: Completed lower level travel sheets (individual piece parts, lower assemblies, etc.) will be maintained in Bonded Stores as part of the part number history folder. Completed upper level travel sheets will be archived in Document Control per P0108. All travel sheets are to be archived for no less than 5 years.

As-Built Procedure guidelines

The following is written to establish common rules for all users of As-Built Procedures. These documents will define all operations to be performed, the recording of data and be archived upon completion.

1. Initial Form:

The procedure must be released by Document Control prior to use.

2. Use of Procedure:

There are two methods of using Procedures for operations to be performed per travel sheet call-out.

An electronic method for Procedures to be used in the Class 10 cleanroom is as follows:

- The IDT or QA Representative will entered data directly into a Laptop computer containing an electronic version of the procedure.
- “Signatures” shall be designated by **BLACK CAPITAL BOLD LETTERS**.
- “Redlines” shall be in ***RED BOLD ITALICS*** to make them distinguishable both on the Laptop screen and on the hard copy printout. Redline changes must be approved by both the RE and QE.
- Digital pictures are to be as necessary during the performing of integration type activities.
- Following completion of the procedure a hard copy of the “as-built” procedure will be printed then signed off and stamped by all the designated parties. All redlines must be stamped and dated by the RE and QE.

A hard copy of the procedure will be used for all operations performed outside of the cleanroom environment.

- Data is to be recorded as define within the body of the procedure.
- “Redline” changes to the procedure must be approved by the RE and QE via stamps and dates.
- Following completion of the procedure the ITD and QE Manager shall review and close the last page via their signatures, stamps and date. Pictures shall be added to the end of the “As-Built” as necessary.

3. Archive:

Hard copies of completed “As-Built” Procedures are to be archived by Document Control for no less then 5 years.

4. Repeated Use of Procedures:

Procedures may be used more then once during the manufacturing, assembly, integration and testing of GP-B. In the event a procedure is to be used again it is the responsibility of the RE ensure that all redlines from previous “As-Builts” have been incorporated via ECO and that the procedure has been approved and released through Document Control.