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Gravity Probe B Relativity Mission

TEST DATA TRANSFER PROCEDURE

GRAVITY PROBE-B

P0953, A

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1 History

Rev	Date	Description
-	10/23/02	initial
A	4/22/03	Added History Table, added clarity of data expected, changed delivery method from tape to electronic transfer

2 Purpose and Scope:

This document defines the Test Data transfer processes from LMMS podg4 to Stanford University moc-server over the closed IOnet during the current testing phase. It also defines problem resolution or escalation path should any issues arise.

3 Applicability:

This procedure applies to any testing at LMMS that produces new data sets that Stanford University would use for its own testing efforts or archival purposes. These data include:

2.1. Any valid Timing test data
2.2. Any valid Functional test data
2.3. Any valid MisNomOps test data
2.4. Any valid test which has data going into the SSR
2.5. Any valid Thermal Vac test data recorded into the SSR

Please note that "valid" simply means that the test wasn't scrapped or abandoned partway through.

4 Procedure

3.1. Stanford Software QE receives email notification of a testing effort that would produce the desired test data per process already in place.

3.2. LMMS will keep an electronic log file (called a “README” or “README_logbook” file) in the test run directory. The file will, at a minimum, contain the name and date of the test, the name of the lead test operator and any particular anomalies that may affect test results (e.g. “we stopped this test due to technical problems at 03:30 GMT”).

3.3. Data Transfer. LMMS will notify Stanford of data readiness and then do the process described in a) below. Should method a) be unavailable for some reason, a magnetic data tape shall be used for file transfer via the Stanford Software QE.

a) LMMS will use the automatic file transferring script available on Pod G4. This script is called tlm_report and can only be run on podg1. It asks the user to enter the files he or she wishes to transfer and short description of the test associated with the files. After user entries are complete, the script copies the README and the data from the run directory into /var/safs/data/vc1and2temp, then to the moc-server into

/home/safs/vc0 and v12 where it can be picked up by the data processing team. After running the script, LMMS will still notify Stanford via email to the ops team that data has been created. An example might say "Ops folks – we ran tlm_report script an hour ago. Expect 2 vc0 files and 4 vc1and2 files from yesterday's Misnomops test that ended at 3:30 AM PST."

5 Timing

Time frames for sending notification to data processing will be within 24 hours of test completion when LMMS is running a single shift, within 12 hours when LMMS is running a double shift, and within 8 hours when LMMS is running 24/7 shifts.). Time frames for SU Data Processing to complete file transfers are within one business day when LMMS is running a single shift, within 12 hours when LMMS is running a double shift, and within 5 business hours when LMMS is running 24/7 shifts.). Messages files may be pulled at the end of a shift if there is not a power down until then. If not running tlm_report, SCP transfers will be made as follows.

From the MOC Server:
To copy the data from /home/safs/: scp ops@podg4 :/gpb/ops/common/curr_run_dir/vc12* v12/
To get listing in a directory: ssh ops@podg4 ls /gpb/ops/common/curr_run_dir/ or ssh ops@podg4 ls /gpb/common
From podg:
All files will go to the "**safs**" user account (password is documented in working copy of P0915) on the MOC Server.

i. vc0 files will go to the **vc0/** directory

```
format:  > scp  vc0_file1 [vc0_file2 …]  safs@moc-server:/home/safs/vc0/
example: > scp  vc0_210230412.bin        safs@moc-server:/home/safs/vc0/
example: > scp  vc0*.bin                 safs@moc-server:/home/safs/vc0/
```

ii vc1+2 files will go to the **v12/** directory

```
format:  > scp vc1and2_f1 [vc1and2_f2 …] safs@moc-server:/home/safs/v12/
example: > scp  vc1and2_210230413.bin    safs@moc-server:/home/safs/v12/
example: > scp  vc1*                     safs@moc-server:/home/safs/v12/
```

……..(see appendix A for a computer output example of a multi-file transfer)

iii EGSE_tlm, README and messages files will go to the **test_archives/** directory (group all of these into one directory which has a unique name that does not contain any colons ":")

```
format: > scp -r directory  safs@moc-server:/home/safs/test_archives/
example: > scp  Mar18_2003_153221/  safs@moc-
server:/home/safs/test_archives/
```

……..(WARNING: scp will NOT support directory/filenames which contain the colon ":" character)

If any data transfer issues arise, the test engineer transferring the data are to email the ops group to explain that the time limit cannot be met. He or she should then contact the Stanford Software QE.

6 Archival

The Stanford data processing group will archive all data on the science server (backed up nightly). Archives will be under /home/tdp/ and the appropriate test period (e.g. thermal_vac, timing_tests, et cetera). At the end of each test period, the data processing group will make and label a tape of all the files within three business days for the Stanford Software QE to archive the test data and documentation package. Data processing will also keep records of all processing, including a file to test correspondence data table.

Appendix A
SCP Example

```
{305} date
Thu Oct 24 00:43:36 GMT 2002
{306} pwd
/home/ron/tmp/podxfer_scp
{307} \ls -l vc1*
-rw-r--r--   1 ron      users    9151056 Oct 23 22:27 vc1and2_210221845.bin
-rw-r--r--   1 ron      users    77008320 Oct 23 22:35 vc1and2_210222249.bin
-rw-r--r--   1 ron      users    13991616 Oct 23 22:37 vc1and2_210230338.bin
-rw-r--r--   1 ron      users    47967552 Oct 23 22:42 vc1and2_210230516.bin
{308} scp   vc1*   safs@moc-server:/home/safs/v12/
safs@moc-server's password:
vc1and2_210221845.bi 100%
|*****************************************************************************|  8936 KB
00:03
vc1and2_210222249.bi 100%
|*****************************************************************************| 75203 KB
00:29
vc1and2_210230338.bi 100%
|*****************************************************************************| 13663 KB
00:04
vc1and2_210230516.bi 100%
|*****************************************************************************| 46843 KB
00:16
{309} ssh moc-server -l safs "ls -l /home/safs/v12/vc1* "
safs@moc-server's password:
-rw-r--r--   1 safs     users    9151056 Oct 23 22:27 /home/safs/v12/vc1and2_210221845.bin
-rw-r--r--   1 safs     users    77008320 Oct 23 22:35 /home/safs/v12/vc1and2_210222249.bin
-rw-r--r--   1 safs     users    13991616 Oct 23 22:37 /home/safs/v12/vc1and2_210230338.bin
-rw-r--r--   1 safs     users    47967552 Oct 23 22:42 /home/safs/v12/vc1and2_210230516.bin
{310}
```