



W. W. Hansen Experimental Physics Laboratory
STANFORD UNIVERSITY
Stanford, California 94305-4085
Gravity Probe B Relativity Mission

**S1007 Rev. –
June 3, 2004**

On-Orbit Spin Up Coordination Plan

Prepared by
B. Muhlfelder

ITAR Assessment Performed

Tom Langenstein

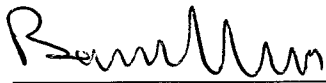
A handwritten signature in black ink, appearing to be "T. Langenstein", written over a horizontal line.

Date

ITAR Control Required? Yes ☒ No

6.7.04

S1007 Signoff



Barry Muhlfelder Program Technical Manager

6/3/2004

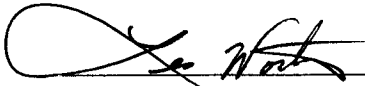
Date



Gaylord Green Program Manager

6/3/2004

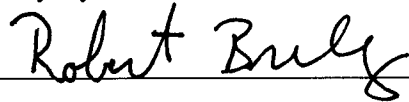
Date



for Tony Lyons MSFC

6/03/04

Date



Robert Brumley Gyro Lead

6/3/04

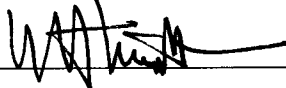
Date

SM for Norm Bennett via email

6/7/04

Norm Bennett Spacecraft

Date



Francis Everitt Principal Investigator

04/21/04

Date

This document describes the personnel coordination plan for the on-orbit science gyroscope spin up operations. All spin up operations will be governed by this document (or a revision to this document as required).

Low Speed Spin Up

Meetings were held on 24 May and 25 May, 2004 to review and authorize the low speed science gyroscope spin up operations. Each proposed gyroscope spin up operation was reviewed and approved by the personnel as listed in document #1 below. On the day of each spin up, the plan is for the flight director in the Mission Operations Center (MOC) to poll each of space vehicle subsystems (per the check lists in S0635 Rev C) to confirm proceeding with spin up. Deviations from the check list valves shall be recorded on a spin up waiver form. To waive an item on the check list, the waiver form must be signed by the REE, the flight director, the ARB chair, and the mission director.

5 Hz and Full Spin Up

At the 24 May, 2004 meeting the decision was reached to hold two formal readiness reviews: a Science Gyro On-orbit 5 Hz Spin Up Readiness Review (S1008) and a Science Gyro On-orbit Full Speed Spin Up Readiness Review (S1009). The 5 Hz spin up review will nominally be held on 2 June, 2004. The full speed spin up readiness review has not yet been scheduled. Each of the readiness reviews will be authorized/signed by the team members as listed in document #1 below. Following the closure of all readiness review action items for a particular gyro, the coordination/signoff off sheet for that gyro will be signed off by the team members appearing on the signoff list for S1007.

The documentation as listed below will be included in the record for each spin up. These records shall be stored in the Sdoc achieve in the S1007 folder.

Documents

1. Coordination/Signoff Sheet
2. Signed Waiver Sheets

Coordination/Signoff Sheet (Item #1 of S1007)

Date of Spin up Operation _____

Gyroscopes to be spun _____

Barry Muhlfelder	Program Technical Manager/Mission Director	Date
Gaylord Green	Program Manager	Date
Francis Everitt	Principal Investigator	Date
John Turneure	Co-PI	Date
Robert Schultz	Systems Engineering	Date
Tony Lyons	MSFC	Date
Bill Bencze	GSS/ARB	Date
Bruce Clarke	SRE	Date
Dave Hipkins	GSS	Date
Robert Brumley	Gyro/GMA/ECU	Date
Sasha Buchman	Gyro	Date
Mac Keiser	Science	Date
Marcie Smith	Mission Operations	Date
Norm Bennett	Spacecraft	Date

may 24, 2004

GO/NO GO MOC Roll

~~Appendix~~

60-4

69-1

✓A	1	ECU	✓	✓
✓B	2	SRE	✓	✓
✓C	3	GSS	✓	✓
✓D	4	GMA	✓	✓
✓E	5	PEPS	✓	✓
✓E	6	FSW (Salem mode)	✓	✓
F	7	ATC	✓	✓
	8	GYRO	✓	✓
	9	TCS	✓	✓
	10	COM	✓	✓

MD

[Signature]
may 24, 2004

[Signature]
may 24, 2004

GYROS #1 & 4

ultra Low Speed Spin up

may 24, 2004

#1 Rm
Coordination/Signoff Sheet (Item #2 of S1007)

Date of Spinup Operation May 24, 2004

Gyroscopes to be spun 1, 4 - 15 Sec Low Flow

Barry Muhlfelder

May 24, 2004

Barry Muhlfelder

Program Technical Manager/Mission Director

Date

GB Green

24 May 04

Gaylord Green

Program Manager

Date

W. A. Hitt

24 May 04

Francis Everitt

Principal Investigator

Date

John P. Turneaure

24 May 04

John Turneaure

Co-PI

Date

Robert A. Schultz

5/24/04

Robert Schultz

Systems Engineering

Date

Anthony T. Lyons

5/24/04

Tony Lyons

MSFC

Date

Bill Bencze

24 MAY 04

Bill Bencze

GSS/ARB

Date

Bruce Clarke

5/24/04

Bruce Clarke

SRE

Date

Dave Hipkins

5/24/04

Dave Hipkins

GSS

Date

Robert Brumley

5/24/04

Robert Brumley

Gyro/GMA/ECU

Date

Sasha Buchman

5/24/04

Sasha Buchman

Gyro

Date

Mac Keiser

5/24/04

Mac Keiser

Science

Date

Marcie Smith

5/24/04

Marcie Smith

Mission Operations

Date

Barry Muhlfelder for Norm Bennett via telecon

5/24/04

Norm Bennett

~~Science~~

Date

Space Vehicle

Spin-up Waiver Form

03

Date: 5/24/05

Originator: Roy Morishige

Waiver For: (1Hz) 5 Hz Full Spin
(circle all that apply)

Sub-System: Safemode test PM-Btry SOCLmt1 & PM-Bus-Voltage

Discrepancy requiring waiver:

Spin-up SO635, Req C states that PM-Btry SOCLmt1 & PM-Bus-Voltage responses are masked to SM macro 64. Battery-SOCLmt1 is masked to 2, 3, 11, 15, 48 & 59. Bus-Voltage is masked to 1.

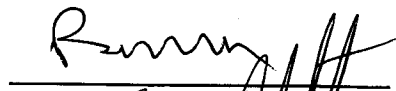
Rationale:

Need to have Safemode Macros in place.

Recommend As Permanent Change? (Y) N

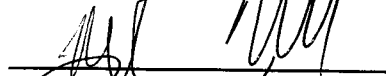
Concurrence:

Mission Director



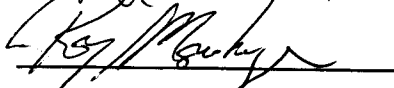
Approved? (Y) N

Flight Director



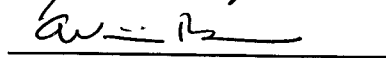
Approved? Y N

RE



Approved? (Y) N

ARB Chair



Approved? (Y) N

Spin-up Waiver Form

04

Date: 5/24/04

Originator: Kyle Sanders

Waiver For:

(circle all that apply)

1Hz

5 Hz

Full Spin

Sub-System: ECU/GMA

Discrepancy requiring waiver: DE_GMA — GP4 } limits should be -1 to 22 psia
DE_GMA — GP5 }

DE_GMA — GP6 } limits for these 9 pressure
: monitors should be -1 to 1 psia
GP14 } (GP6 limits should be -1 to 20 psia)

Rationale:

GP4 and GP5 have been reading approximately 21 psi. This is nominal and the limits should be increased to 22 psi.

GP6 - GP14 show a small negative value instead of 0, so the limits should be lowered to -1 psi.

Recommend As Permanent Change?

(Y)

N

Concurrence:

Mission Director

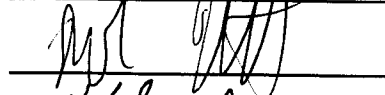


Approved?

(Y)

N

Flight Director

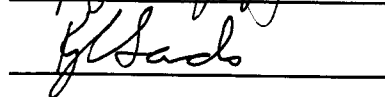


Approved?

(Y)

N

RE



Approved?

(Y)

N

ARB Chair



Approved?

(Y)

N

Spin-up Waiver Form

01

Date: 2006 145-20:21Z

Originator: W Growitz

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: SRE

Discrepancy requiring waiver: Bracket Temperature Controller
is not configured in High Gain.
Still Low Gain.

Rationale:

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

Berry M...

Approved? (Y) N

Flight Director

Will G...

Approved? (Y) N

RE

Werner

Approved? (Y) N

ARB Chair

aw - R

Approved? (Y) N

Spin-up Waiver Form

02

Date: 5/24/04

Originator: Richard Demers

Waiver For: (circle all that apply)
☒ 1Hz ☒ 5 Hz ☒ Full Spin

Sub-System:

GSS

Discrepancy requiring waiver:

CHARGE MEASUREMENT ENABLED IN DOC CHECKLIST, SHOULD BE DISABLED.

Rationale:

THE TEMPLATE TO ENABLE CHARGE MEASUREMENT IS SCHEDULED FOR AFTER GAS FLOW.

Recommend As Permanent Change?

☒ Y

☐ N

Concurrence:

Mission Director

Benny M. ...

Approved? ☒ Y

☐ N

Flight Director

...

Approved? ☒ Y

☐ N

RE

David N. Hopkins

Approved? ☒ Y

☐ N

ARB Chair

...

Approved? ☒ Y

☐ N

APPENDIX D – GMA PRE-SPIN-UP CHECKLIST

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
GMA pressure – GMA Tank pressure: GP1	DE_GMA_____GP1	500-2000 psia		500-2000 psia		500-2000 psia		500-2000 psia		500-2000 psia	
GMA pressure – GMA Pressure Pre-regulator (A) GP2	DE_GMA_____GP2	500-2000 psia		500-2000 psia		500-2000 psia		500-2000 psia		500-2000 psia	
GMA pressure – GMA Pressure Pre-regulator (B) GP3	DE_GMA_____GP3	500-2000 psia		500-2000 psia		500-2000 psia		500-2000 psia		500-2000 psia	
GMA pressure – GP4	DE_GMA_____GP4	0-20psia		0-20psia		0-20psia		0-20psia		0-20psia	
GMA pressure – GP5	DE_GMA_____GP5	0-20psia		0-20psia		0-20psia		0-20psia		0-20psia	
GMA pressure – GMA Manifold pressure: GP6	DE_GMA_____GP6	0-20psia		0-20psia		0-20psia		0-20psia		0-20psia	
GMA pressure – GMA Input to gyroscope 1: GP7	DE_GMA_____GP7	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA pressure – GMA Input to gyroscope 1: GP8	DE_GMA_____GP8	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA pressure – GMA Input to gyroscope 2: GP9	DE_GMA_____GP9	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA pressure – GMA Input to gyroscope 2: GP10	DE_GMA_____GP10	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA pressure – GMA Input to gyroscope 3: GP11	DE_GMA_____GP11	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA pressure – GMA Input to gyroscope 4: GP12	DE_GMA_____GP12	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	

(continued next page)

APPENDIX D – GMA PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
GMA pressure – GMA Input to gyroscope 4: GP13	DE_GMA_____GP13	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA pressure – GMA VENT: GP14	DE_GMA_____GP14	0-1psia		0-1psia		0-1psia		0-1psia		0-1psia	
GMA Temp. – GMA #1A SDT/a	TE_GMA_SDT_1A	0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C	
GMA Temp. – GMA #1B SDT/b	TE_GMA_SDT_1B	0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C	
GMA Temp. - GMA #2A SDT/a	TE_GMA_SDT_2A	0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C	
GMA Temp. - GMA #2B SDT/b	TE_GMA_SDT_2B	0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C	
GMA Temp. - GMA #3A SDT/a	TE_GMA_SDT_3A	0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C	
GMA Temp. - GMA #3B SDT/b	TE_GMA_SDT_3B	0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C		0°C - 20°C	

(end of GMA Information)

APPENDIX E – PWR/SM PRE-SPIN-UP CHECKLIST

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
ECU Aliveness	PM_ECU_Alv10Hz	Enabled (Test only for gyros 2 and 3)		Enabled		Enabled		Enabled (Test only)		Enabled (Test only)	
QBS Temperature	PM_QBS_Temp	Enabled (5k mode, Test only for gyro 2)		Enabled (15k mode)		Enabled (15k mode)		Enabled (15k mode)		Enabled (15k mode)	
GSS N GMA Pressure; N=1,2,3,4	PM_SpinGyroNTst; N=1,2,3,4	Disabled		Enabled (3.5 psia limit, Test only)		Enabled (3.5 psia limit, Test only for gyros 3 and 4)		Enabled (3.5 psia limit)		Enabled (3.5 psia limit)	
GMA High Vacuum P9A Pressure	PM_SpinP9ATest	Enabled 3e-3 torr limit; (Test only)		Enabled 5e-4 torr limit		Enabled 3e-3 torr limit		Enabled 3e-3 torr limit		Enabled 3e-3 torr limit	
GMA High Vacuum P9B Pressure	PM_SpinP9BTest	Enabled 3e-3 torr limit; (Test only)		Enabled 5e-4 torr limit		Enabled 3e-3 torr limit		Enabled 3e-3 torr limit		Enabled 3e-3 torr limit	
Power - State of Charge #1 test	PM_BttrySOCLmt1	Enabled ⁷		Enabled ⁷		Enabled ⁷		Enabled ⁷		Disabled ⁸	
Bus Voltage Test	PM_Bus_Voltage	Enabled ⁷		Enabled ⁷		Enabled ⁷		Enabled ⁷		Disabled ⁸	

Unless noted the test and mask are enabled.

APPENDIX F – ATC PRE-SPIN-UP CHECKLIST

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
ATC Mode	BC_CurrCntlMod	_1A		_2A		_2A		_2A		_2A	

⁷ While the SM tests for battery SOC and bus voltage are enabled for this spin-up, their response masks point to SM macro 64, the “null” macro. As such, if either test is triggered, its standard macros do not activate. This keeps the timeline from stopping, but still flags MOC that there is a problem.

⁸ The SM tests for both battery SOC and bus voltage are disabled immediately before full-rate spin-up, i.e., before He starts flowing. Immediately after full-rate spin-up, i.e., after He stops flowing, the SM tests are re-enabled with their masks pointing to the correct macros.

APPENDIX G – SPINUP DATA REVIEW CHECKLIST

Item	Pre-spinup	Post-0Hz	Post-1 Hz	Post 5Hz	Full spin - 10 Hz	Full spin
Gyro Performance						
Spindown rate			✓	✓		✓
Polhode period			✓	✓		✓
Pendulation	✓	✓				
Leakage rate			✓	✓	✓	✓
Spinup Rate (tau)			✓	✓	✓	✓
Housing temperature			✓	✓	✓	✓
Rotor charge	✓	✓	✓	✓	✓	✓
Freedom of motion	✓					
Cross-spindown rate				✓		✓
GSS Performance						
Control Efforts	✓	✓	✓	✓	✓	✓
Positioning	✓	✓	✓	✓	✓	✓
Loop stability	✓	✓	✓	✓	✓	✓
Mode transfers	✓		✓	✓		✓
Backup controllers	✓		✓	✓	✓	✓
Box health (temps)	✓	✓	✓	✓		✓
Spin axis alignment/cal			✓	✓		✓
Gyro Calibrations			✓			✓
GSW issues	✓	✓	✓	✓	✓	✓
SQUID/SRE Performance						
Noise	✓	✓	✓	✓	✓	✓
Trapped flux			✓	✓	✓	✓
BTC	✓	✓	✓	✓		✓
Box health (temps)	✓	✓	✓	✓	✓	✓
Probe						
Pressures (P9)			✓	✓	✓	✓
Final filter temps			✓	✓	✓	✓
SIA temps			✓	✓	✓	✓
GMA pressures		✓	✓	✓	✓	✓
GMA temps		✓	✓	✓	✓	✓
UV system						
Discharge rate	✓	✓	✓	✓		✓
Lamp performance	✓	✓	✓	✓		✓

Gyro #2 1 Hz Spinup

May 26, 2004

MOC Go/No-go Poll

	go	no-go
ECU	✓	
SRE	✓	
GSS	✓	
GMA		
EPS	✓	
FSW	✓	
ATC	✓	
Thermal	✓	
COM	✓	
Gyro	✓	
MD	PV Pony Mick	

#1 BM
Coordination/Signoff Sheet (Item #8 of S1007)

Date of Spinup Operation May 2004

Gyroscopes to be spun #2 in center, low flow 90 seconds

Barry Muhlfelder

Barry Muhlfelder

Program Technical Manager/Mission Director

May 25, 2004

Date

Gaylord Green

Gaylord Green

Program Manager

25 May 2004

Date

Francis Everitt

Francis Everitt

Principal Investigator

5/25/2004

Date

John Turneure

John Turneure

Co-PI

5/25/04

Date

Robert Schultz

Robert Schultz

Systems Engineering

5/25/04

Date

Anthony T Lyons

Tony Lyons

MSFC

5/25/04

Date

Bill Bencze

Bill Bencze

GSS/ARB

24 May 04

Date

Bruce Clarke

Bruce Clarke

SRE

5/25/04

Date

Dave Hipkins

Dave Hipkins

GSS

5/25/04

Date

Robert Brumley

Robert Brumley

Gyro/GMA/ECU

5/25/04

Date

Sasha Buchman

Sasha Buchman

Gyro

5/25/04

Date

Mac Keiser

Mac Keiser

Science

5/25/04

Date

Marcie Smith

Marcie Smith

Mission Operations

25 May 04

Date

Norm Bennett for NR via telecon

Norm Bennett

Spacecraft

25 May 04

Date

Spin-up Waiver Form

#

147-03

Date: 5/26/04

Originator: NDM

Waiver For:

1Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System: ECU

Discrepancy requiring waiver:

Butterfly valve A checklist F6 (Hex)

change to F2 (Hex)

Rationale:

checklist assumes full butterfly valve open & close operation. to minimize hardware use, kept EV's open & only closed/then opened LV2. F2 indicate last commanded butterfly valve was LV2

Recommend As Permanent Change?

Y **(N)**

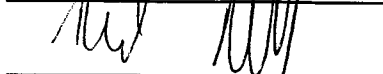
Concurrence:

Mission Director



Approved? **(Y)** N

Flight Director



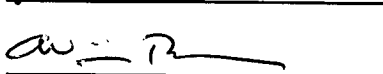
Approved? Y N

RE



Approved? **(Y)** N

ARB Chair



Approved? **(Y)** N

Spin-up Waiver Form

#

147-04

Date: 2004/147-21:18ZOriginator:Waiver For:

(circle all that apply)

1Hz

5 Hz

Full Spin

Sub-System:

SRE

Discrepancy requiring waiver: 1) Bkt 1 sensor 2, Bkt 2 sensor setpoints are slightly below below setpoints.
2) All four bracket sensors are in high gain

Rationale:

1) ok since brackets are in temperature control
2) ok since we (the Bracket Temperature Controller) is in coarse mode

PQ-SB1-LGAIN CDA
PQ-SB1-LGAIN CDB
PQ-SB2-LGAIN CDA
PQ-SB2-LGAIN CDB

HIGH-GAIN
OR
LO-GAIN
mode

SQ-Bkt 1 Sr 1 SPCDA
SQ-Bkt 1 Sr 2 SPCDB
SQ-Bkt 2 Sr 2 SPCDB
SQ-Bkt 2 Sr 1 SPCDA

x FA00
- x 8000
(2.2-2.8K)

Recommend As Permanent Change?

(Y)

(X)

Concurrence:

Mission Director

Approved? (Y) N

Flight Director

Approved? Y N

RE

Approved? (Y) N

ARB Chair

Approved? (Y) N

Spin-up Waiver Form

#

147-05

Date: 147 :21:23 - 2004

Originator: Richard Demers

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System:

GSS2

Discrepancy requiring waiver:

1. Gyro2 centered
2. ATC IS ENABLED IN TCM, G60 TURNS IT OFF.
3. S8_INTTMOFLgs - 2 = ~~666~~ VICE OK 1ST ZERO = OK

Rationale:

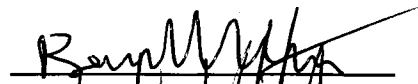
1. Gyro 2 CAN'T be in the channel (GAS)
2. Software turns off ATC DATA.
3. MONITOR IS APPARENT VICE CHILD.

Recommend As Permanent Change?

(Y) ITEM 2 & 3
N

Concurrence:

Mission Director



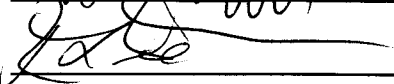
Approved? (Y) N

Flight Director



Approved? (Y) N

RE



Approved? (Y) N

ARB Chair



Approved? (Y) N

Gyro



(Y)

ice

Spin-up Waiver Form

#

147-02

Date: 5/26/04

Originator: Roy Morishige

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: Safe mode

Discrepancy requiring waiver:

S0635, Rev C, Appendix E states that PM_BtySOC_Lmt1 & PM_Bus_Voltage ~~S/B~~ masked to max 64. PM_BtySOC_Lmt1 is masked to 2, 3, 11, 15, 48, & 59. Bus_Voltage is masked to 1

Rationale:

To maintain SIC health & safety

Recommend As Permanent Change? Y N

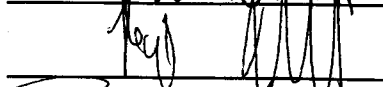
Concurrence:

Mission Director



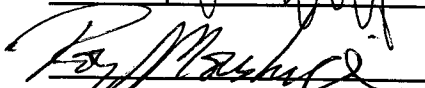
Approved? (Y) N

Flight Director



Approved? (Y) N

RE



Approved? (Y) N

ARB Chair



Approved? (Y) N

Spin-up Waiver Form

#

147-01

Date:

2/26/04

Originator:

CHRIS GRAY

Waiver For:

(circle all that apply) 1Hz

5 Hz

Full Spin

Sub-System:

GMA

Discrepancy requiring waiver:

GP5 > 20 psia - now @ 21.78:
GP6 thru GP14 < 0 All pressure from GP6 to GP14 are neg.

Rationale:

GP5 > 20 psia is within spec for GMA system.
GP6 → GP14 pressure transducers are all negative
values due to OCA calibrations.

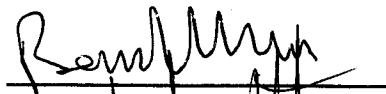
Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

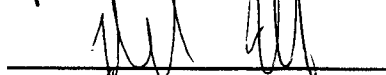


Approved?

Y

N

Flight Director

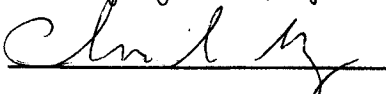


Approved?

Y

N

RE



Approved?

Y

N

ARB Chair



Approved?

Y

N

Gyro #1 Low Speed Spin up (1H)

May 27, 2004

MOC Go/No-go Poll

	go	no-go
ECU	✓	
SRE	✓	
GSS	✓	
GMA	✓	
EPS	✓	
FSW	✓	
ATC	✓	
Thermal	✓	
Com		✓
Gyro		✓
MD	Beny [Signature]	

#1 Run
Coordination/Signoff Sheet (Item #8 of S1007)

Date of Spinup Operation May 2004

Gyroscopes to be spun #1 low floor 90sec or less
May 25, 2004

Barry Muhlfelder

Program Technical Manager/Mission Director

Date

Gaylord Green

Program Manager

Date

25 May 2004

Francis Everitt

Principal Investigator

Date

5/25/2004

John Turneure

Co-PI

Date

5/25/04

Robert Schultz

Systems Engineering

Date

5/25/04

Tony Lyons

MSFC

Date

5/25/04

Bill Bencze

GSS/ARB

Date

25 May 04

Bruce Clarke

SRE

Date

5/25/04

Dave Hipkins

GSS

Date

5/25/04

Robert Brumley

Gyro/GMA/ECU

Date

5/25/04

Sasha Buchman

Gyro

Date

5/25/04

Mac Keiser

Science

Date

5/25/04

Marcie Smith

Mission Operations

Date

25 May 04

Norm Bennett for NB via telecon

Norm Bennett

Spacecraft

Date

25 May 2004

Spin-up Waiver Form

#

~~147-03~~

148-01

Date: ~~5/26/04~~ 5/27Originator: ~~HDM~~ KSWaiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: ECU

Discrepancy requiring waiver:

Vatterfly value A checklist F6 (Hex)

change to F1 (Hex)

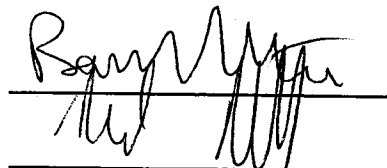
Rationale:

checklist assumes full vatterfly valve open & close operation. to minimize hardware use, kept EV's open & only closed/then opened LV1. F1 indicate last commanded vatterfly valve was LV1

Recommend As Permanent Change? Y (N)

Concurrence:

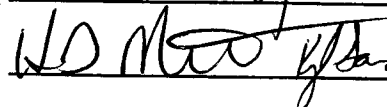
Mission Director

Approved? (Y)

N

5/27/04
RM

Flight Director

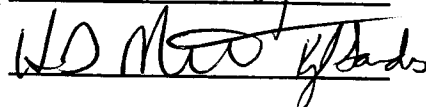


Approved? Y

N

Mac

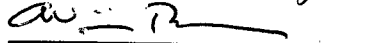
RE

Approved? (Y)

N

5/27/04

ARB Chair

Approved? (Y)

N

5/27/04 arb

Spin-up Waiver Form

#

148-02

Date: May 27 2004

Originator: CHRIS GRAY

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 thru GP-14 is a negative value, limit is 0-1 psia

Rationale:

GMA pressures are all nominal. Limits need to be updated.

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

Ramblin

Approved? Y N

Flight Director

Marcelino

Approved? Y N

RE

Chris G

Approved? Y N

ARB Chair

as-r

Approved? Y N

Spin-up Waiver Form

#

148-03

Date: 2004:148:16:24 Z

Originator: R. DeMars

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: GSS1

Discrepancy requiring waiver:

1. S4-INTIMDFLGS1 IS 0060
2. P4-ATCPSTINB11 IS ENABLED
3. P4-MISSIONMODE1 IS SPIN-UP
4. P3-CHGMTFLTEN1 IS DISABLED

Rationale:

1. 0060 - 1ST DIGIT = OK (CHART SHOULD BE 0060)
2. SCHEDULED TURNS OFF ATC APP IN 660
3. CHART HAS SUM SHOULD BE SPIN-UP
4. CHARGE MEASUREMENT IS ENABLED AFTER SPIN-UP.

Recommend As Permanent Change?

Y N
ITEM 1,2,3

Concurrence:

Mission Director

R. DeMars

Approved? Y N

Flight Director

Theresa Smith

Approved? Y N

RE

David L. Stephens

Approved? Y N

ARB Chair

a-m

Approved? Y N

Spin-up Waiver Form

#

148-04

Date: ~~4/18~~ 2004:148

Originator: BRUCE CHARKE - SRE

Waiver For:

1Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System:

SRE

Discrepancy requiring waiver:

- ① Bkt sensor setpoints out of range. SP = 2.61K
- ② All Bkt hardware in HIGH-GAIN mode (S/B LO-GAIN mode)
- ③ Snapshots in 20 Hz round robin mode (S/B 1 KHz round robin).

Rationale:

See waiver dated 2004:147

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Renn

Approved?

Y

N

Flight Director

Maureen

Approved?

Y

N

RE

Gene

Approved?

Y

N

ARB Chair

ay

Approved?

Y

N

Spin-up Waiver Form

#

148-05

Date:

5/27/04

Originator:Waiver For:

(circle all that apply)

1Hz

5 Hz

Full Spin

Sub-System:

Safemode

Discrepancy requiring waiver:

S0635, Rev. C, Appendix E: PM_BHrySOCLmt1 & PM_Bus_Voltage
SM macros are noted to be masked to 64. PM_BHrySOCLmt1 is masked to
2, 3, 11, 15, 48, 59. PM_Bus_Voltage is masked to 1.

Rationale:

To insure health & safety of S/C

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Ren M

Approved?

Y

N

Flight Director

Marcel Smith

Approved?

Y

N

RE

Ray Morishige

Approved?

Y

N

ARB Chair

am

Approved?

Y

N

1648 Pullin

Gyro 3

1 Hz

Spin up

60

NO-GO

GO EPS

✓

400 arc sec

GO ATL

✓

NOT yet COM

✓

go/RM Thermal

✓

GO FSW

✓

GO SRE

✓

GO GMA

✓

GO GSS

✓

GO Gyro

✓

GO ECU

✓

60 Revolution no

RM

Gyro #3

Low

Speed Spin up

5/28/04

#1 ^{PM}
Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation May. 2004

Gyroscopes to be spun #3 low flow, 90 sec or less.

Barry Muhlfelder

Barry Muhlfelder

Program Technical Manager/Mission Director

May 25, 2004

Date

Gaylord Green

Gaylord Green

Program Manager

25 May 2004

Date

Francis Everitt

Francis Everitt

Principal Investigator

5/25/2004

Date

John Turneaure

John Turneaure

Co-PI

5/25/04

Date

Robert Schultz

Robert Schultz

Systems Engineering

5/25/04

Date

Anthony Lyons

Tony Lyons

MSFC

5/25/04

Date

Bill Bencze

Bill Bencze

GSS/ARB

25 May 04

Date

Bruce Clarke

Bruce Clarke

SRE

5/25/04

Date

Dave Hipkins

Dave Hipkins

GSS

5/25/04

Date

Robert Brumley

Robert Brumley

Gyro/GMA/ECU

5/25/04

Date

Sasha Buchman

Sasha Buchman

Gyro

5/25/04

Date

Mac Keiser

Mac Keiser

Science

5/25/04

Date

Marcie Smith

Marcie Smith

Mission Operations

25 May 04

Date

Norm Bennett for NB

Norm Bennett

Spacecraft

25 May 04

Date

Spin-up Waiver Form

#

149-03

Date: 2004/149-16:50

Originator: Michael Simon

Waiver For: 1 Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: GSS3

Discrepancy requiring waiver:

1. ATC position filter is Enabled in H/M, 660 turns OK.
2. SY-Int Two Flgs - 3 = 0660, should be OK.
3. Item 67 (verify rotor charge) cannot be verified

Rationale:

1. Software turns off ATC position filter
2. First ~~digit~~ byte $\Rightarrow$ OK
3. Charge measurement is disabled.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Bennett

Approved?

Y

N

Flight Director

Mauesmin

Approved?

Y

N

RE

Michael Simon

Approved?

Y

N

ARB Chair

aw

Approved?

Y

N

Spin-up Waiver Form

#

149-04

Date: 5/28/04

Originator: CHRIS GRAY

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 then GP-14 is a negative value, Limit is 0-1 psia

Rationale:

GMA pressures are all nominal. Limits need to be updated.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Benny Mann

Approved?

Y

N

Flight Director

Marie Smith

Approved?

Y

N

RE

[Signature]

Approved?

Y

N

ARB Chair

[Signature]

Approved?

Y

N

ce

Spin-up Waiver Form

#

147-02

149-05

Date: 5/28/04

Originator: DARYL WILLIAMS

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: Safe mode

Discrepancy requiring waiver:

S0635, Rev C, Appendix E states that PM_BHySocLmt1 & PM_Bus_Voltage ~~S/B~~ masked to macro 64. PM_BHySocLmt1 is masked to 2, 3, 11, 15, 48, & 59. Bus_Voltage is masked to 1

Rationale:

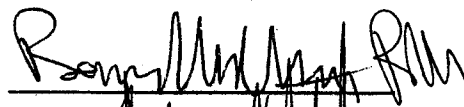
To maintain SIC health & safety

Recommend As Permanent Change? Y N

5/28/04

Concurrence:

Mission Director



Approved?

Y

N

Flight Director



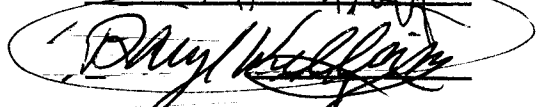
Approved?

Y

N

manal bin

RE



Approved?

Y

N

ARB Chair



Approved?

Y

N

aw - R

Spin-up Waiver Form

#

147-03

149-02

Date: 5/28/04

Originator: NDM KS

Waiver For:

1Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System:

ECU

Discrepancy requiring waiver:

Valterfly valve A checklist F6 (Hex)

change to ^{FI}~~FI~~ (Hex)

Rationale:

checklist assumes full valterfly valve open & close operation. to minimize hardware use, kept EV's open & only closed/then opened ^{LVI}~~FI~~. ^{FI}~~FI~~ indicates last commanded valterfly valve was ^{LVI}~~FI~~

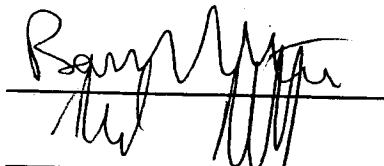
Recommend As Permanent Change?

Y

☒ N

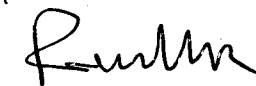
Concurrence:

Mission Director

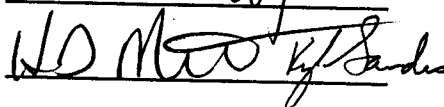


Approved? ☒ Y

N



Flight Director



Approved? Y

N

Mar 5/28/04

RE



Approved? ☒ Y

N

5/28/04

ARB Chair

Approved? ☒ Y

N

ARB

Spin-up Waiver Form

#

149-01

Date: 2004:149:16:30:00

Originator:

Waiver For:

1Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System:

SRE

Discrepancy requiring waiver:

- 1) BKT 2 sensor 2 is slightly below setpoints
2) All 4 BKT sensors are in high gain

Rationale:

- 1) OK since BKTs are in temp control
2) OK since BTC is in coarse mode

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Bennett

Approved?

Y

N

Flight Director

Maue/min

Approved?

Y

N

RE

S. J. W.

Approved?

Y

N

ARB Chair

Ch. R.

Approved?

Y

N

5) 28/04
2004/149/20

GYRO 1 Hz

go

NO GO

CDH/FSW

✓

EPS

✓

ATC

✓

COM

✓

TCS

✓

ECU

✓

GMA

✓

SRE

✓

GYRO

✓

GSE

✓

MD

✓

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation May 2004

Gyroscopes to be spun #4 respin, low flow, 90 sec on low

Barry Muhlfelder

May 24, 2004

Barry Muhlfelder

Program Technical Manager/Mission Director

Date

GB Green

25 May 2004

Gaylord Green

Program Manager

Date

W. A. Everitt

5/25/04

Francis Everitt

Principal Investigator

Date

John Turneure

5/25/04

John Turneure

Co-PI

Date

Robert Schultz

5/25/04

Robert Schultz

Systems Engineering

Date

Anthony Lyons

5/25/04

Tony Lyons

MSFC

Date

Bill Bencze

25 MAY 04

Bill Bencze

GSS/ARB

Date

Bruce Clarke

5/25/04

Bruce Clarke

SRE

Date

Dave Hipkins

5/25/04

Dave Hipkins

GSS

Date

Robert Brumley

5/25/04

Robert Brumley

Gyro/GMA/ECU

Date

Sasha Buchman

5/25/04

Sasha Buchman

Gyro

Date

Mac Keiser

5/25/04

Mac Keiser

Science

Date

Marcie Smith

25 May 04

Marcie Smith

Mission Operations

Date

Barry Muhlfelder for NB

25 May 04

Norm Bennett

Spacecraft

Date

Spin-up Waiver Form

#

149-10

Date: 5/28/04

Originator: CHRIS GRAY / KEN BOWEN

Waiver For: (1Hz) 5 Hz Full Spin
(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 thru GP-14 is a negative value, limit is 0-1 psia

Rationale:

TE-GMA-SOT-1A...3B > 20°C limit
GMA pressures are all nominal. Limits need
to be updated.

AT PEAK OF HEATING CYCLE, GMA SOT'S CAN SLIGHTLY EXCEED
20°C BY 1-2°C. LIMITS SHOULD BE ~~UPDATED~~ EVALUATED FOR
UPDATING. SPEC CAN BE EXCEEDED FOR ~1 HR EVERY ~12 HRS.

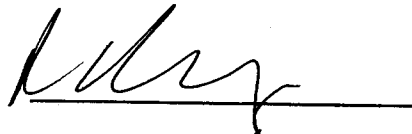
Recommend As Permanent Change?

(Y)

N

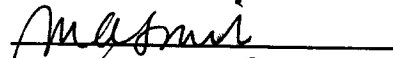
Concurrence:

Mission Director



Approved? (Y) N

Flight Director



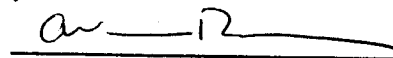
Approved? (Y) N

RE



Approved? (Y) N

ARB Chair



Approved? (Y) N

Spin-up Waiver Form

#

147-03 149-09

Date: 5/28/04 Gyro 4

Originator: NDM KS

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: ECW

Discrepancy requiring waiver:

Vatferfly value A checklist F6 (Hex)
change to ^{F1}~~FW~~ (Hex)
Rationale:

checklist assumes full vatferfly valve open & close operation. to minimize hardware use, kept EV's open & only closed/shut opened ^{LVI}~~FW~~. ^{F1}~~FW~~ indicate last commanded Vatferfly valve was ^{LVI}~~FW~~

Recommend As Permanent Change? Y (N)

Concurrence:

Mission Director

[Signature]

Approved? (Y)

N 5/28/04 D/ly
Gyro 4

Flight Director

[Signature]

Approved? Y

N 5/28/04 Mamm

RE

[Signature]

Approved? (Y)

N 5/28/04 Gyro 4

ARB Chair

[Signature]

Approved? (Y)

N [Signature]

Spin-up Waiver Form

#

147- 149-08

Date: 5/28/04

Originator: DARYL WILLIAMS

Waiver For: (1Hz) 5 Hz Full Spin
(circle all that apply)

Sub-System: Safe mode (SM)

Discrepancy requiring waiver:

S0635, Rev C, Appendix E states that PM Bty Soc Lmt 1, PM-Bus Voltage s/B masked to 64. PM Bty Soc Lmt 1 = masked 2, 3, 11, 15, 48, 59. & PM Bus Voltage = masked to 1

Rationale:

Must maintain S/C Health & Safety

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

R. Myers

Approved? Y N

Flight Director

Mapin

Approved? (Y) N

RE

Daryl Williams

Approved? (Y) N

ARB Chair

W. R.

Approved? (Y) N

Spin-up Waiver Form

#

149-07

Date: 149:20:21:00

Originator:

Waiver For:

(circle all that apply)

1Hz

5 Hz

Full Spin

Sub-System:

SRE

Discrepancy requiring waiver:

- 1) Bkt 1 Sensor 2, Bkt 2 Sensor setpoints are slightly below setpoints
- 2) All 4 Bracket sensors are in low gain.

Rationale:

- 1) OK since Brackets are in temperature control
- 2) OK since BTC is in coarse mode

Recommend As Permanent Change?

(Y)

N

Concurrence:

Mission Director

R. Kelly

Approved?

(Y)

N

Flight Director

Matmin

Approved?

(Y)

N

RE

Sw. M.

Approved?

(Y)

N

ARB Chair

W. D.

Approved?

(Y)

N

Spin-up Waiver Form

#

149-06

Date: 05/28/04

Originator: RAY FONTECUA

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: GSS 4

Discrepancy requiring waiver:

- 1) SY-INTMO FLGS_4 = 0060 VICE OK. 0060
- 2) ATC FILTER POSITION = ENABLED IN CHECKLIST. DISABLED IN 660 HZ.

Rationale:

- 1) MONITOR IS A PARENT MONITOR
- 2) SOFTWARE DISABLES ATC POSITION FILTER DATA.

Recommend As Permanent Change? (Y) N

Concurrence:

Mission Director

Rbc

Approved? (Y) N

Flight Director

Marcelino

Approved? (Y) N

RE

Raymond R. P.

Approved? (Y) N

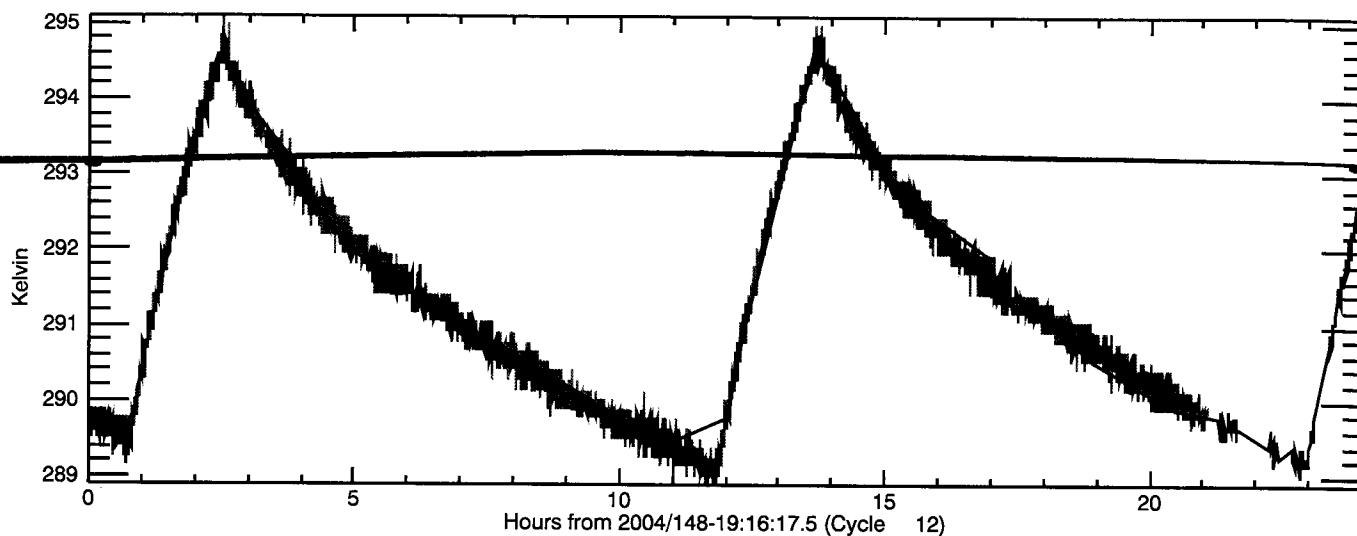
ARB Chair

aw. R.

Approved? (Y) N

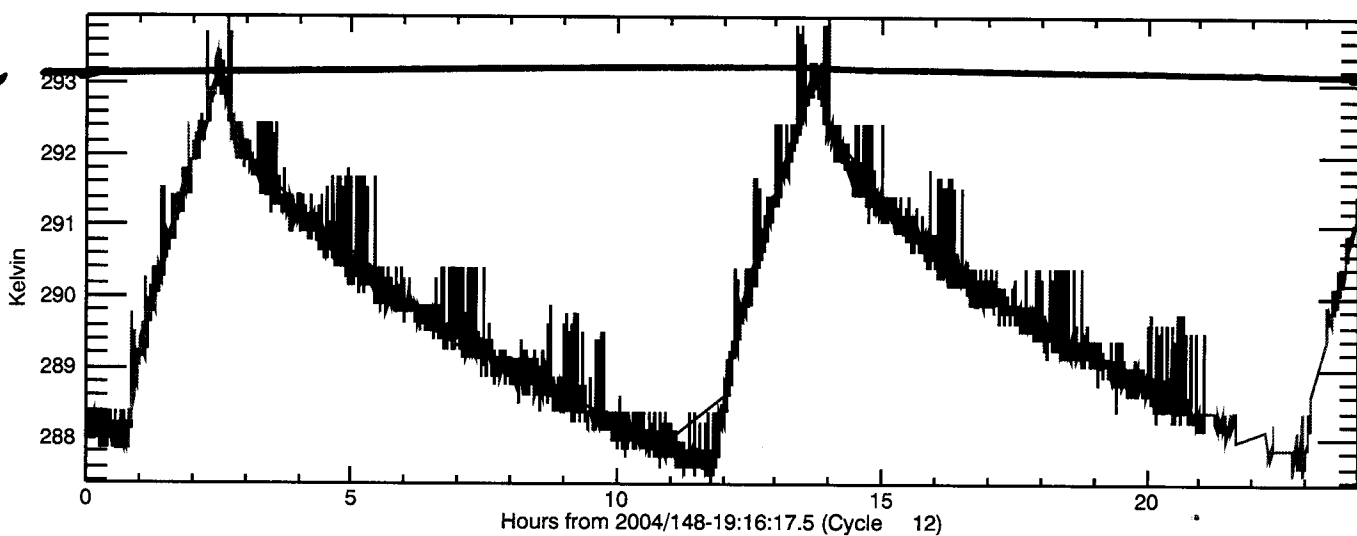
PERFORMANCE TYPICAL SINCE L + 1
ECU - TE_GMA_SDT_2A

20°C



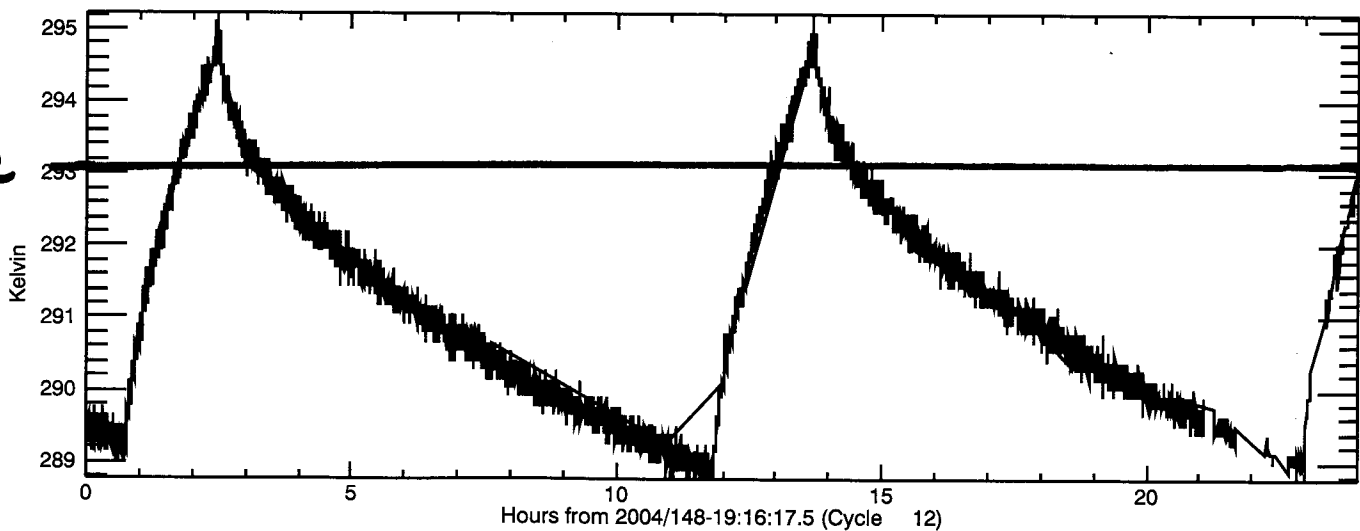
ECU - TE_GMA_SDT_3B

20°C

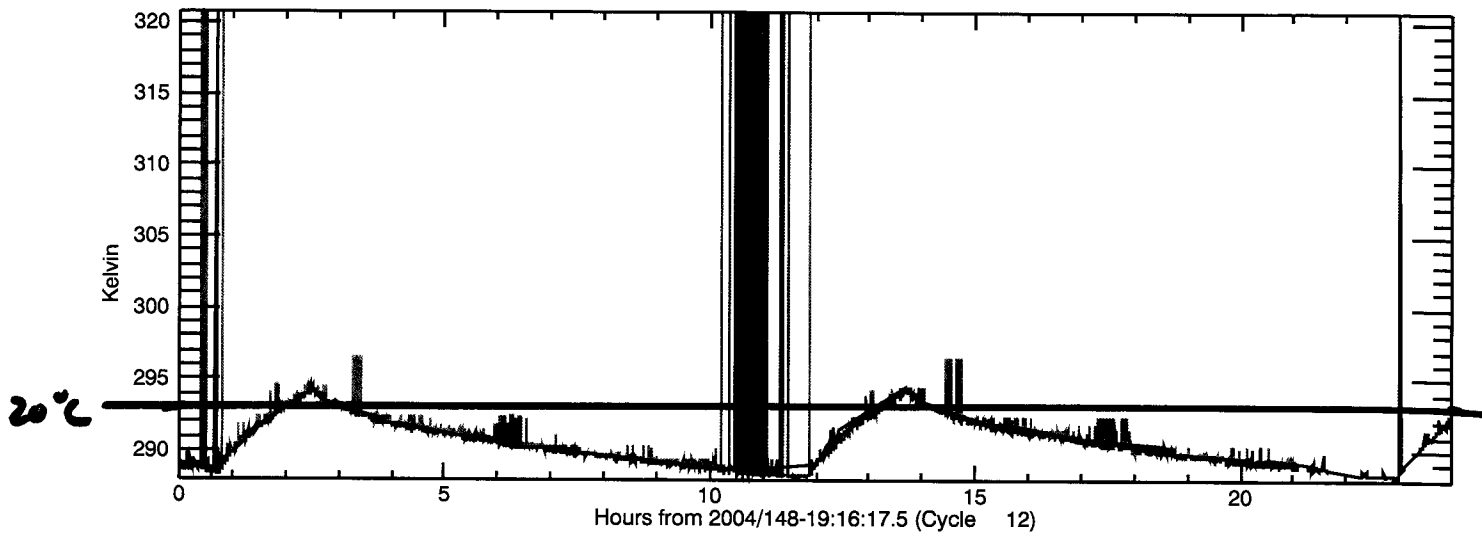


ECU - TE_GMA_SDT_3A

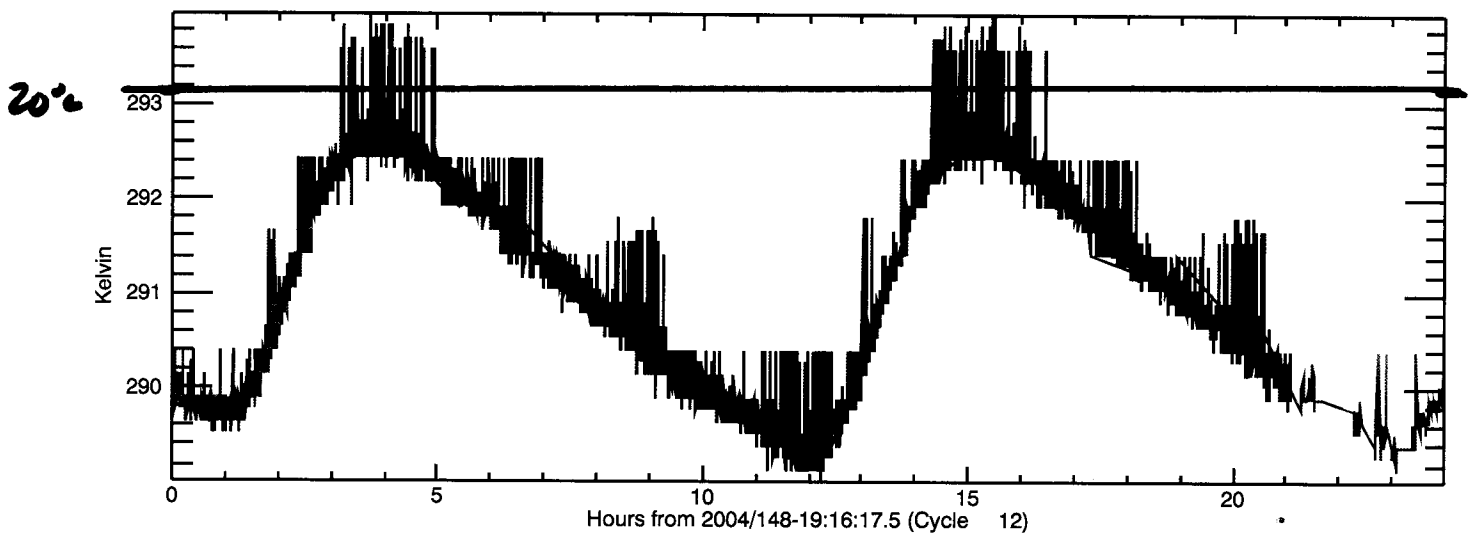
20°C



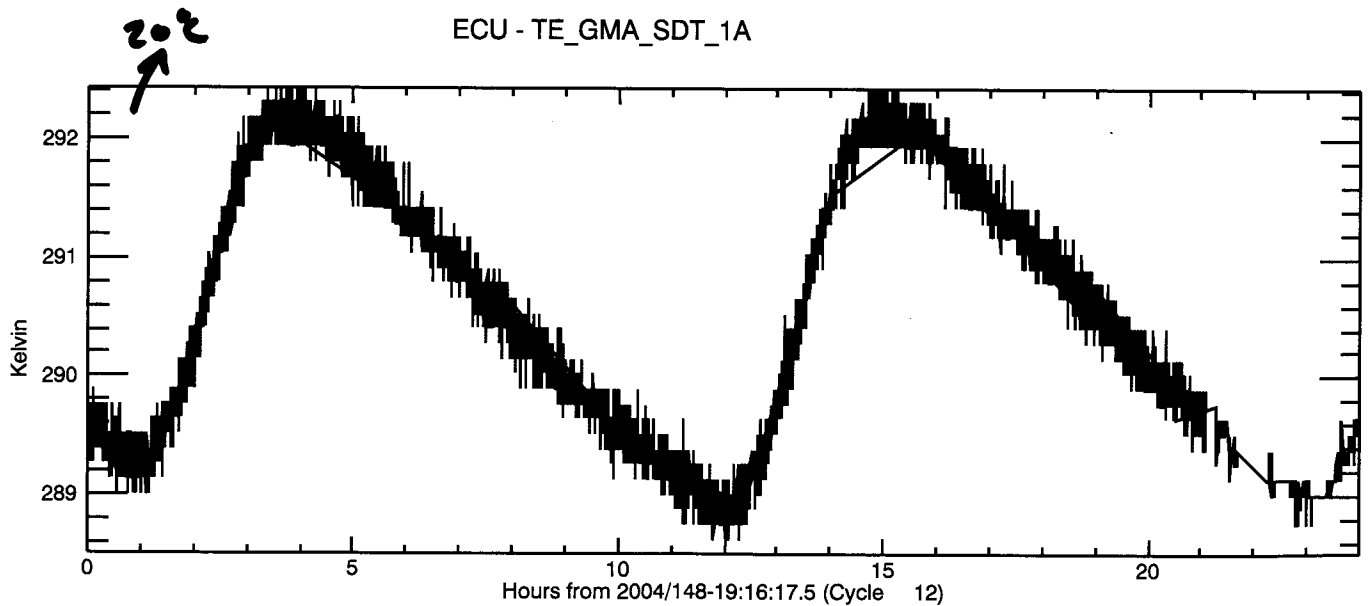
ECU - TE_GMA_SDT_2B



ECU - TE_GMA_SDT_1B



ECU - TE_GMA_SDT_1A



Gyro #4
Low Speed Spin up
6/2/2004

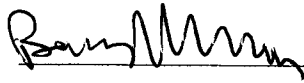
MOC Go/No-go Poll

system	Go	No-Go
ECU	✓	
SRE	✓	
GSS	✓	
GMA	✓	
EPS	✓	
FSW	✓	
ATC	✓	
Gyro	✓	
TCS	✓	
Com	✓	
MD	✓	

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation June 2 2004

Gyroscopes to be spun 4 1 Hz spinup



Barry Muhlfelder

Program Technical Manager/Mission Director

6/1/2004

Date



Gaylord Green

Program Manager

6/1/04

Date

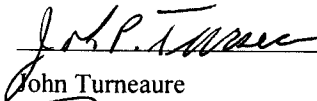


Francis Everitt

Principal Investigator

6/1/04

Date

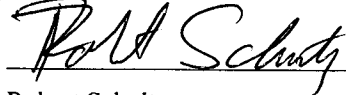


John Turneure

Co-PI

6/1/2004

Date

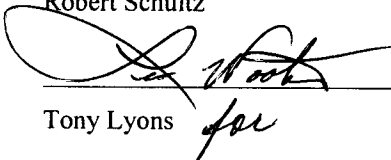


Robert Schultz

Systems Engineering

6/1/2004

Date

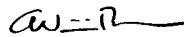


Tony Lyons

MSFC

6/1/04

Date

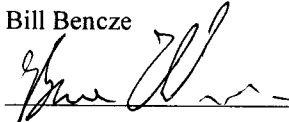


Bill Bencze

GSS/ARB

1 JUN 04

Date

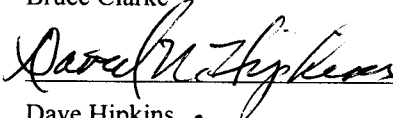


Bruce Clarke

SRE

1 JUNE 04

Date

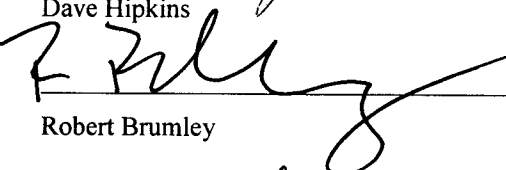


Dave Hipkins

GSS

6/1/04

Date

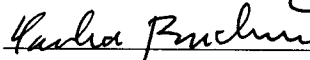


Robert Brumley

Gyro/GMA/ECU

6/1/04

Date

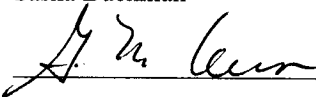


Sasha Buchman

Gyro

6/1/04

Date



Mac Keiser

Science

6/1/04

Date



Marcie Smith

Mission Operations

1 June 04

Date



Norm Bennett

Spacecraft

1 JUNE 04

Date

Spin-up Waiver Form

#

Date: 2004/154:20:00

Originator: DeMars, R.

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System:

GSS 4

Discrepancy requiring waiver:

1. Sy_IntTmoFlgs_4 = 0000
2. Py_ATCPSFINBL4 = ENABLED
3. Py_CHGMFLTP4 = DISABLED

1st ZERO = OK

Rationale:

1. 1st ZERO IN 0060 = OK
2. Software changes to DISABLED, doesn't update TLM.
3. Charge measurement SHOULD BE DISABLED, NOT ENABLED

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

Rumr

Approved? Y N

Flight Director

DB

Approved? (Y) N

RE

Stephen E. Brown

Approved? (Y) N

ARB Chair

in

Approved? (Y) N

Spin-up Waiver Form

#

Date: 6/2/04

Originator:

Roy Morishige

Waiver For:

(circle all that apply)

1Hz

5 Hz

Full Spin

Sub-System:

Safe mode PM-SpinGro3Tst.

Discrepancy requiring waiver:

PM-SpinGro3Tst = Activated S/B = to Enabled.

Rationale:

Has not been reset to Enabled. Activated on 5/30/04

PM-SpinGro3Tst is masked to 64.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Bennett

Approved?

Y

N

Flight Director

VS

Approved?

Y

N

RE

Roy Morishige

Approved?

Y

N

ARB Chair

Wim

Approved?

Y

N

Spin-up Waiver Form

#

Date: 154-20-002

Originator: Waver

Waiver For:

(circle all that apply)

☒ 1 Hz

☐ 5 Hz

☐ Full Spin

Sub-System:

Discrepancy requiring waiver:

Bracket Temperature controller
setpoints are @ ~29K, not 30K.

Rationale:

Should not impact spin

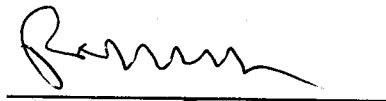
Recommend As Permanent Change?

Y

☒ N

Concurrence:

Mission Director



Approved?

☒ Y

N

Flight Director

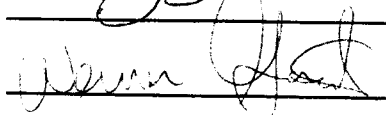


Approved?

☒ Y

N

RE



Approved?

☒ Y

N

ARB Chair



Approved?

☒ Y

N

Spin-up Waiver Form

#

Date: 6-2-04

Originator: CHRIS GRAY

Waiver For: (circle all that apply) ☒ 1Hz ☐ 5 Hz ☐ Full Spin

Sub-System: GYRO 4

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 thru GP-14 is a negative value, limit is 0-1 psia

Rationale:

GMA pressures are all nominal. Limits need to be updated.

Recommend As Permanent Change? ☒ Y ☐ N

Concurrence:

Mission Director

Bennett

Approved? ☒ Y ☐ N

Flight Director

Jacobs

Approved? ☒ Y ☐ N

RE

Chen

Approved? ☒ Y ☐ N

ARB Chair

Wright

Approved? ☒ Y ☐ N

Spin-up Waiver Form

#

Date: 6/2/04

Originator: Roy Morishige

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: Safemode

Discrepancy requiring waiver:

SO635, Rev. C, Appendix E: PM_Btry SOC Lmt1 & PM BUS_Voltage
SM macros are noted to be masked to 64. PM_Btry SOC Lmt1 is
masked to 2,3,11,15,48,59. PM_BUS_Voltage is masked to 1

Rationale:

To insure health & safety of S/C

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Bennett

Approved?

Y

N

Flight Director

DB

Approved?

Y

N

RE

Roy Morishige

Approved?

Y

N

ARB Chair

Winn

Approved?

Y

N

Spin-up Waiver Form

#

Date: 1/2/04

Originator: LDM

Waiver For: (1Hz) 5 Hz Full Spin
(circle all that apply)

Sub-System:

ECW

Discrepancy requiring waiver:

BE_VflyVSeOnOTA = F6, reads F1
as expected for LVI commanded open
after EVI-4 sequence.

Rationale:

Recommend As Permanent Change?

Y

(N)

Concurrence:

Mission Director

Bern

Approved?

(Y)

N

Flight Director

DS

Approved?

(Y)

N

RE

LDM

Approved?

(Y)

N

ARB Chair

an

Approved?

(Y)

N

APPENDIX A – ECU PRE-SPIN-UP CHECKLIST

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Final filter heaters	Open Loop ²	• RE_Config App_1 = 0 • RE_Config App_2 = 0		• RE_Config App_1 = 0 • RE_Config App_2 = 0		• RE_Config App_1 = 0 • RE_Config App_2 = 0		• RE_Config App_1 = 0 • RE_Config App_2 = 0		• RE_Config App_1 = 0 • RE_Config App_2 = 0	
Final filter temperature - Final filter 1&2 GRT/a: T-06P	TE_Fi1_2_aGT06P	• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)	
Final filter temperature - Final filter 1&2 GRT/b: T-0P	TE_Fi1_2_bGT0P	• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)	
Final filter temperature - Final filter 3&4 GRT/a: T-08P	TE_Fi3_4_aGT08P	• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)	
Final filter temperature - Final filter 3&4 GRT/b: T-09P	TE_Fi3_4_bGT09P	• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)		• R(1.2,16) • y(1.4,14)	
Gyroscope temperature - Gyroscope #1 GRT: T-01Q	TE_Gyroscope_1_GT01Q	• R(1.2,7.5) • y(1.4,7)		• R(1.2,7.5) • y(1.4,7)		• R(1.2,7.5) • y(1.4,7)		• R(1.2,7.5) • y(1.4,7)		• R(1.2,7.5) • y(1.4,7)	
Gyroscope temperature - Gyroscope #2 GRT: T-02Q	TE_Gyroscope_2_GT02Q	• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)	
Gyroscope temperature - Gyroscope #3 GRT: T-03Q	TE_Gyroscope_3_GT03Q	• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)	
Gyroscope temperature - Gyroscope #4 GRT: T-04Q	TE_Gyroscope_4_GT04Q	• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)		• R(1.2, 7.5) • y(1.4,7)	
Vatterfly Valve A	BE_VflyVSeOnOfA	F6 ³ (hex)		F6 ² (hex)		F6 ² (hex)		F1 ² (hex)		F1 ² (hex)	
Vatterfly Valve A Htr	BE_Htr_gagOnOfA	10 (binary)		10 (binary)		10 (binary)		10 (binary)		10 (binary)	
Vatterfly Valve B	BE_VflyVSeOnOfB	F6 ² (hex)		F6 ² (hex)		F6 ² (hex)		F6 ² (hex)		F6 ² (hex)	
Vatterfly Valve B Htr	BE_Htr_gagOnOfB	10 (binary)		10 (binary)		10 (binary)		10 (binary)		10 (binary)	

(continued on next page)

² All testing has been done with open loop.³ All vatterfly valves are closed by a series of commands which end by displaying the state of EV4B.

APPENDIX ~~B~~^A – ECU PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Pressure - Calibrated P9A pressure	DE_VACG_P9A_PWR ⁴ DE_VACG_P9A_RNG ³ DE_VACG_P9A_SIG ³ SM_GMAPresP9A ³	• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁵		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴	
Pressure - Calibrated P9B pressure	DE_VACG_P9A_PWR ³ DE_VACG_P9A_RNG ³ DE_VACG_P9A_SIG ³ SM_GMAPresP9A ³	• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴		• R(-200,16083) • R(-200,14836) • R(-200,14836) • Enabled⁴	

(end of ECU Information)

⁴ This task name is from the old GMA. The corresponding task name for the new GMA was not released at the time this document revision was published.

⁵ For this SM test to fail, the pressure must exceed .01 T for 11 secs

APPENDIX B – SRE PRE-SPIN-UP CHECKLIST

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
All SQUIDs should be in range 3 ⁶	PQ_SQ_RangeCmd1, PQ_SQ_RangeCmd2, PQ_SQ_RangeCmd3, PQ_SQ_RangeCmd4	3		3		3		3		3	
All SQUIDs should be in gain 1 ⁵	PQ_SQ_PGainCmd1, PQ_SQ_PGainCmd2, PQ_SQ_PGainCmd3, PQ_SQ_PGainCmd4	1		1		1		1		1	
SQUID bracket temperature - SQUID bracket 1 Sensor 1 data for SRE-A	SQ_Bkt1Sensor1A	+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)	
SQUID bracket temperature - SQUID bracket 1 Sensor 2 data for SRE-B	SQ_Bkt1Sensor2B	+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)	
SQUID bracket temperature - SQUID bracket 2 Sensor 1 data for SRE-B	SQ_Bkt2Sensor1B	+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)	
SQUID bracket temperature - SQUID bracket 2 Sensor 2 data for SRE-A	SQ_Bkt2Sensor2A	+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)		+/- 5 V (+/- 25 mK)	
SQUID bracket Sensor 1 temperature setpoint command for SRE-A	SQ_Bkt1Sr1SPCdA	0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)	
SQUID bracket Sensor 2 temperature setpoint command for SRE-B	SQ_Bkt1Sr2SPCdB	0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)	

(continued on next page)

⁶ These checks apply only to any gyroscope being spun-up.

APPENDIX B – SRE PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
SQUID bracket Sensor 1 temperature setpoint command for SRE-B	SQ_Bkt2Sr1SPCdB	0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)		0xFA00 – 0x8700 (2.2 – 2.6 K)	
SQUID bracket Sensor 2 temperature setpoint command for SRE-A	SQ_Bkt2Sr2SPCdA	0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)		0xE900 – 0xAC00 (2.2 – 2.6 K)	
SQUID bracket 1 sensor 1 Lo gain enable command for SRE-A	PQ_SB1_LGainCdA	HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN	
SQUID bracket2 sensor1 Lo gain enable command for SRE-B	PQ_SB1_LGainCdB	HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN	
SQUID bracket2 sensor2 Lo gain enable command for SRE-A	PQ_SB2_LGainCdA	HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN	
SQUID bracket1 sensor2 Lo gain enable command for SRE-B	PQ_SB2_LGainCdB	HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN		HIGH_GAIN	
SQUID FLL Status	PQ_SQ_LckDsbCd1, PQ_SQ_LckDsbCd 2, PQ_SQ_LckDsbCd 3, PQ_SQ_LckDsbCd 4	Enabled		Enabled		Enabled		Enabled		Enabled	
FFT Window	PQ_FFT_Window_1, PQ_FFT_Window_2, PQ_FFT_Window_3, PQ_FFT_Window_4	COS2_Hanning		COS2_Hanning		COS2_Hanning		COS2_Hanning		COS2_Hanning	

(continued on next page)

APPENDIX B – SRE PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
PQ_FFT_Mode	PQ_FFT_Mode_1, PQ_FFT_Mode_2, PQ_FFT_Mode_3, PQ_FFT_Mode_4	Decimated		Decimated		Decimated		Normal		Normal	
SQ_SRESnapMode	SQ_SRESnapMode	N/A		1=default 1KHz		1=default 1KHz		1=default 1KHz		1=default 1KHz	
LM Cal Signal	PQ_Cal1_LMEbCdA, PQ_Cal3_LMEbCdA, PQ_Cal2_LMEbCdB, PQ_Cal4_LMEbCdB	N/A		0=Disabled		0=Disabled		0=Disabled		0=Disabled	
TF Cal Signal	PQ_Cal1_TFEbCdA, PQ_Cal3_TFEbCdA, PQ_Cal2_TFEbCdB, PQ_Cal4_TFEbCdB	N/A		0=Disabled		0=Disabled		0=Disabled		0=Disabled	
SRE CPU management - Spin-Up mode The initialization parameters should be set to default values.	N/A	N/A		N/A		N/A		N/A		N/A	
SQUID output not railed	SQ_20HzSignal_1 SQ_20HzSignal_2 SQ_20HzSignal_3 SQ_20HzSignal_4	± 9.9 V		± 9.9 V		± 9.9 V		± 9.9 V			

(end of SRE Information)

APPENDIX C – GSS PRE-SPIN-UP CHECKLIST

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
ARBITER_STATE 0= PON STATE, 1= PRIME, 2=SBT, 3=SB1, 4=SB2, 5=HBT, 6=HB1, 7=HB2, 8=LB1, 9=LB2, 10-15 are spare:	PY_ARB_STATE_1, PY_ARB_STATE_2, PY_ARB_STATE_3, PY_ARB_STATE_4	1=PRIME		1=PRIME		1=PRIME		1=PRIME		1=PRIME	
Snapshots	PY_snapNbl1, PY_snapNbl2, PY_snapNbl3, PY_snapNbl4	Enabled		Disabled		Disabled		Disabled		Disabled	
Position, a-axis (SM-filtered data)	RY_pstna1, RY_pstna2, RY_pstna3, RY_pstna4	G1: -4.04 μm G2: -4.04 μm G3: -4.04 μm G4: -4.04 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm	
Position, b-axis (SM-filtered data)	RY_pstnb1, RY_pstnb2, RY_pstnb3, RY_pstnb4	G1: -4.04 μm G2: -4.04 μm G3: -4.04 μm G4: -4.04 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm	
Position, c-axis (SM-filtered data)	RY_pstnc1, RY_pstnc2, RY_pstnc3, RY_pstnc4	G1: -4.04 μm G2: -4.04 μm G3: -4.04 μm G4: -4.04 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm		G1: -5.72 μm G2: -5.08 μm G3: -6.35 μm G4: -6.99 μm	

(continued on next page)

APPENDIX C – GSS PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Communications to Host - 1-Hz Sync Fail Flag	PY_1HzSncFail1, PY_1HzSncFail2, PY_1HzSncFail3, PY_1HzSncFail4	OK		OK		OK		OK		OK	
Communications to Host - 10-Hz Sync Fail Flag	PY_10HzSncFail1, PY_10HzSncFail2, PY_10HzSncFail3, PY_10HzSncFail4	OK		OK		OK		OK		OK	
Communications to SRE Timing Chain 16FO_A_ACTIVE 0 = SRE 16f0 A absent, 1 = SRE 16f0 A present OR 16FO_B_ACTIVE 0 = SRE 16f0 B absent, 1 = SRE 16f0 B present	PY_16FO_A_On_1, PY_16FO_A_On_2, PY_16FO_A_On_3, PY_16FO_A_On_4 OR PY_16FO_B_On_1, PY_16FO_B_On_2, PY_16FO_B_On_3, PY_16FO_B_On_4	SRE A Present OR SRE B Present		SRE A Present OR SRE B Present		SRE A Present OR SRE B Present		SRE A Present OR SRE B Present		SRE A Present OR SRE B Present	
Control Rate 0=10Hz, 1=n/a, 2=660Hz, 3=220Hz, 4=alternate 10 Hz, 5=1553 only	PY_cntrlRate_1, PY_cntrlRate_2, PY_cntrlRate_3, PY_cntrlRate_4	220-Hz		660-Hz		660-Hz		660-Hz		660-Hz	
Interrupt Timeout Flag Summary	SY_intTmoFlgs_1, SY_intTmoFlgs_2, SY_intTmoFlgs_3, SY_intTmoFlgs_4	OK		OK		OK		OK		OK	

(continued on next page)

APPENDIX C – GSS PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Payload Processor Error Flag 1=OK, 0=failure	PY_gssppFail1, PY_gssppFail2, PY_gssppFail3, PY_gssppFail4	OK		OK		OK		OK		OK	
GSW Failure Flag 1=OK, 0=failure	PY_gswFail1, PY_gswFail2, PY_gswFail3, PY_gswFail4	OK		OK		OK		OK		OK	
Gyroscope Commands Enabled Flag 0 = disabled, 1 = enabled	PY_gyrCmdEbl_1, PY_gyrCmdEbl_2, PY_gyrCmdEbl_3, PY_gyrCmdEbl_4	Enabled		Enabled		Enabled		Enabled		Enabled	
I/O Mode 0=normal, 1=sine, 2>manual out, 3=constant	PY_ioState_1, PY_ioState_2, PY_ioState_3, PY_ioState_4	Normal		Normal		Normal		Normal		Normal	
ATC position filter enabled 1=enabled, 0=disabled	PY_ATCpsFINbl1, PY_ATCpsFINbl2, PY_ATCpsFINbl3, PY_ATCpsFINbl4	Disabled		Disabled		Disabled		Disabled		Disabled	
Electrode Voltage Square Sum Filter Enabled 1=enabled, 0=disabled	PY_eVVfltNb1, PY_eVVfltNb2, PY_eVVfltNb3, PY_eVVfltNb4	Enabled		Enabled		Enabled		Enabled		Enabled	
Electrode Mean Voltage Filter Enabled 1=enabled, 0=disabled	PY_eMVfltNb1, PY_eMVfltNb2, PY_eMVfltNb3, PY_eMVfltNb4	Enabled		Enabled		Enabled		Enabled		Enabled	

(continued on next page)

APPENDIX C – GSS PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Position Signal Filter Enabled 1=enabled, 0=disabled	PY_posFltNbl1, PY_posFltNbl2, PY_posFltNbl3, PY_posFltNbl4	Enabled		Enabled		Enabled		Enabled		Enabled	
Control Effort Filter Enabled 1=enabled, 0=disabled	PY_ceFltNbl1, PY_ceFltNbl2, PY_ceFltNbl3, PY_ceFltNbl4	Enabled		Enabled		Enabled		Enabled		Enabled	
Bridge Oscillator Amplitude 0 = High Oscillator level, 1 = Low Oscillator level	PY_oscSwitch1, PY_oscSwitch2, PY_oscSwitch3, PY_oscSwitch4	HIGH		HIGH		HIGH		HIGH		HIGH	
Charge Bias Flag 0 = 0V, 1 = +3V, 2 = -3V	PY_UV_bias1, PY_UV_bias2, PY_UV_bias3, PY_UV_bias4	0V		0V		0V		0V		0V	
BU Spin-Up Radius Select 0 = center, 1 = radial position 1, 3 = radial position 2, 7 = radial position 3	PY_Spin-Up_R_Cmd_1, PY_Spin-Up_R_Cmd_2, PY_Spin-Up_R_Cmd_3, PY_Spin-Up_R_Cmd_4	g1=rad pos 1 g2=rad pos 1 g3=rad pos 1 g4=rad pos 1		g1=rad pos 2 g2=rad pos 2 g3=rad pos 3 g4=rad pos 3		g1=rad pos 2 g2=rad pos 2 g3=rad pos 3 g4=rad pos 3		g1=rad pos 2 g2=rad pos 2 g3=rad pos 3 g4=rad pos 3		g1=rad pos 2 g2=rad pos 2 g3=rad pos 3 g4=rad pos 3	
Mission Mode 0 = power on, 1 = Science Mission, 2 = Spin Up, 3 = Ground Test	PY_missionMode1, PY_missionMode2, PY_missionMode3, PY_missionMode4	SMM		SUM		SUM		SUM		SUM	

(continued on next page)

APPENDIX C – GSS PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Controller Mode 0=idle by default, 1=CTM, 2=GTM, 3=Spin-UpM, 4=SMM	PY_cntrlState_1, PY_cntrlState_2, PY_cntrlState_3, PY_cntrlState_4	SMM_LIFT		SUM_LIFT		SUM_LIFT		SUM_LIFT		SUM_LIFT	
Controller Phase 0=idle, 1=CTM calibrate D/A, 2=CTM calibrate A/D, 3=CTM calibrate amps, 4=CTM calibrate bridge, 11=GTM init, 12=GTM prepare lift, 13=GTM lift, 14=GTM soft shutdown, 15=GTM hard shutdown, 21=Spin-UpM init, 22=Spin-UpM prepare lift, 23=Spin-UpM lift, 24=Spin-UpM soft shutdown, 25=Spin-UpM hard shutdown, 31=SMM init, 32=SMM prepare lift, 33=SMM lift, 34=SMM soft shutdown, 35=SMM hard shutdown	PY_cntrlPhase_1, PY_cntrlPhase_2, PY_cntrlPhase_3, PY_cntrlPhase_4	SMM_LIFT		SUM_LIFT		SUM_LIFT		SUM_LIFT		SUM_LIFT	

(continued on next page)

APPENDIX C – GSS PRE-SPIN-UP CHECKLIST

(continued from previous page)

Description	Mnemonic(s)	0-HZ	OK	1-HZ	OK	5-HZ	OK	10-HZ	OK	Full-Rate	OK
Gyroscope status: 0=idle, 1=initializing controller, 2=preparing lift, 3=ready to lift, 4=lifting, 5=levitated, 6=position shutdown, 7=timer shutdown, 8=hard shutdown, 9=operator shutdown, 20=DFM ready, 21=DFM active, 22=DFM violated	PY_gyroscopeStat_1, PY_gyroscopeStat_2, PY_gyroscopeStat_3, PY_gyroscopeStat_4	Levitated		Levitated		Levitated		Levitated		Levitated	
Suspension Failed Flag 1=OK, 0=failure	PY_suspFail1, PY_suspFail2, PY_suspFail3, PY_suspFail4	OK		OK		OK		OK		OK	
Charge Measurement Enabled	PY_ChgMtFltEn1, PY_ChgMtFltEn2, PY_ChgMtFltEn3, PY_ChgMtFltEn4	Enabled		Enabled		Enabled		Enabled		Enabled	
Primary Interrupt Wait Loop Counter	SY_PrInt_WtCntr1, SY_PrInt_WtCntr2, SY_PrInt_WtCntr3, SY_PrInt_WtCntr4	≥10		≥3		≥3		≥3		≥3	
Secondary Interrupt Wait Loop Counter	SY_Slnt_WtCntr1, SY_Slnt_WtCntr2, SY_Slnt_WtCntr3, SY_Slnt_WtCntr4	≥10		≥3		≥3		≥3		≥3	

(end of GSS Information)

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation 90-212

Gyroscopes to be spun #1

<u>Barry Muhlfelder</u>	Program Technical Manager/Mission Director	<u>July 15, 2004</u>
Barry Muhlfelder		Date
<u>Gaylord B Green</u>		<u>15 Jul 2004</u>
Gaylord Green	Program Manager	Date
<u>Francis Everitt</u>		<u>7/15/2004</u>
Francis Everitt	Principal Investigator	Date
<u>John Turneure</u>		<u>15-Jul-04</u>
John Turneure	Co-PI	Date
<u>Robert Schultz</u>		<u>7-15-04</u>
Robert Schultz	Systems Engineering	Date
<u>Anthony T Lyons</u>		<u>7-15-04</u>
Tony Lyons	MSFC	Date
<u>Bill Bencze</u>		<u>15 JUL 04</u>
Bill Bencze	GSS/ARB	Date
<u>Bruce Clarke</u>		<u>15 JUL 04</u>
Bruce Clarke	SRE	Date
<u>Dave Hipkins</u>		<u>15 July 04</u>
Dave Hipkins	GSS	Date
<u>Robert Brumley</u>		<u>July 15, 2004</u>
Robert Brumley	Gyro/GMA/ECU	Date
<u>Sasha Buchman</u>		<u>July 15, 2004</u>
Sasha Buchman	Gyro	Date
<u>Mac Keiser</u>		<u>July 15, 2004</u>
Mac Keiser	Science	Date
<u>Marcie Smith</u>		<u>15 July 04</u>
Marcie Smith	Mission Operations	Date
<u>Norm Bennett</u>		<u>7/15/04</u>
Norm Bennett	Spacecraft	Date

Spin-up Waiver Form

#

Date: 2004:212:15:04

Originator: R. DeWitt

Waiver For: 1Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System:

GSS 1

Discrepancy requiring waiver:

PG_SU_R_Cnd_1 = Radial_pos 1 vice Radial_pos 2 in App c.

~~PG_1HZSNCFAL = FAILED~~ (SHOULD BE OK)

~~PG_10HZSNCFAL = FAILED~~ (SHOULD BE OK)

Rationale:

CHANGED TEMPLATES AND SET TO RADIAL_POS 1

CLEARED
PER PPCIL
78

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

R. DeWitt

Approved? (Y)

N

Flight Director

R. Conway

Approved? Y

N

RE

GSS

R. DeWitt

Approved? (Y)

N

ARB Chair

aw...R

Approved? (Y)

N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation July, 2004

Gyroscopes to be spun 1

5 Hz spinup

Barry Muhl

Barry Muhlfelder

Program Technical Manager/Mission Director

Date

Gaylord Green

7/2/04

Gaylord Green

Program Manager

Date

Francis Everitt

6/30/2004

Francis Everitt

Principal Investigator

Date

John Turneaure

30-June-04

John Turneaure

Co-PI

Date

Robert Schultz

6-30-04

Robert Schultz

Systems Engineering

Date

Anthony T Lyons

7/2/04

Tony Lyons

MSFC

Date

Bill Bencze

28 JUN 04

Bill Bencze

GSS/ARB

Date

Bruce Clarke

30 JUNE 2004

Bruce Clarke

SRE

Date

Dave Hopkins

30-June-04

Dave Hopkins

GSS

Date

Robert Brumley

1-July-04

Robert Brumley

Gyro/GMA/ECU

Date

Sasha Buchman

6/30/04

Sasha Buchman

Gyro

Date

Mac Keiser

6/29/04

Mac Keiser

Science

Date

Marcie Smith

2 July 04

Marcie Smith

Mission Operations

Date

Norm Bennett

7/2/04

Norm Bennett

Spacecraft

Date

Spin-up Waiver Form

#

2004:212:14:48
Date: ~~2004:198:15:19~~
~~2004:210:15:59~~
Originator:

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System: ECW

Discrepancy requiring waiver:

SM-GMAPres P9A is disabled
SM-GMAPres P9B is disabled

Rationale:

accuracy of P9A & P9B gage's suspect.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

R. M. M.

Approved?

Y

N

Flight Director

R. C. C.

Approved?

Y

N

RE

H. M. M.

Approved?

Y

N

ARB Chair

A. R.

Approved?

Y

N

4/9/04

July 2, 2004

GSS1 5Hz spin

RE Checklists for FD Status Polls: Report items underlined every poll, other items only if non-nominal

All REs should also: Report timeline task verifications (give reference number from script if possible)
Report on any out of limit conditions
Report on any non-nominal conditions
Report any required changes to limit mgmt (begin or temporarily disable limit checking)

TLM/CMD good 17:29

Command link verified

RTWorks status: OOLs, SM trips

Event log status: bogus clock events? error messages?

All elements of H&S checklist complete

GV1 if 0 - when does current sequence expire?

CmdX/FrameX connections (if issues)

CSTOLs ready to go

Displays/plots all out/ready

CDH/FSW/SM good

Safemode macros Activated

Safemode Tests Activated

SSR: record/playback (status; also epoch block status)

Safemode status: changes to configuration

Mission SPCP per timeline

DBRO/MRO status if in progress

32k format (primary format) if not IOC

2k format if not 2kDef

Checksum fail (if it changed)

IU ack locked (to oscillator)

EPS 17:05 good

Bus voltage

Sun/Eclipse status

Battery charge/discharge current

SOC

Battery voltage

V/T level

ATC good good

Control Mode (&GV5 status - indicates 1A/1B/1C)

Roll Rate

Attitude/rate error (nominal is okay)

Orb event status: GSV? in SAA? [shutter open?]

Observer status: Direct, Gyro Hold, etc.

Drag Free if applicable (which gyro)

Maneuver status: in progress?

Orbit Trim status: in progress?

Excess He flow

COM good good

Which transponder is on

Transponder mode (coho/noncoho)

Command decoder lock

Uplink Signal Level

Transmitter Power

Uplink rate if not 2k

Downlink Signal Level

TCS good

Battery temps

Transponder temp (which ever is on)

Fwd GSS temps

Any heaters that are on

Other box temperatures: CCCA, SSR, SAs

ECU good

10 Hz clock (rollover counter incrementing?)

Probe: QBS (GT11P) temp

Probe: Cryopump (GT15P) temp

Dewar: Main Tank (GT10D) temp

Dewar: Guard Tank (ST16D) temp

Vatterfly state

Vac Gage Pressure (if on)

GMA: Tank Pressure (GP1) & any activity

GPS good

Locked/unlocked

If out of lock, for how long?

SRE good

Squids locked

Range/Gain as expected

20 Hz signal status

Bracket Temp Control on/off

SRE GV issues?

SRE Host status: if not enabled

app status: ATC/Sci slope, SLPF, FTT (& mode)

TRE good

gain setting

detector temperature

GSS - each gyro good

gyro status (caged/levitated/spinning/dragfree)

gyro spin rate

control mode (220/660)

arbiter state

GSS GV issues?

GSS Host status: if not enabled

app status: CEF, etc.

Pre - 5 Hz - spin up

rotor charge 1.5 V OK
per observation #78

FD: JRCamp

Spin-up Waiver Form

#

Date: 7/2/04

Originator:

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System:

Gyro/GSS

Discrepancy requiring waiver:

1.5V observed on gyro charge
See ARB obs. 78

Rationale:

telemetry ^{potentially} likely 10x greater than actual
per calibration update.

Contingency available to correct ~~it~~ if
true. However, per previous experience likely
charge is 0.15V

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

[Signature]

Approved?

Y

N

Flight Director

[Signature]

Approved?

Y

N

RE

[Signature]

Approved?

Y

N

ARB Chair

W-B 25 Jul 04

Approved?

Y

N

Spin-up Waiver Form

#

Date: 7/2/04

Originator: CHRIS GRAY / KEN BOWER

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 thru GP-14 is a negative value, limit is 0-1 psia

Rationale:

GMA pressures are all nominal. Units need to be updated.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

ROM

Approved?

Y

N

Flight Director

R Conner

Approved?

Y

N

RE

[Signature]

Approved?

Y

N

ARB Chair

CRB

Approved?

Y

N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation 5 July 2004

Gyroscopes to be spun 2 5 Hz spinup

<u>Barry Muhl</u>	Barry Muhlfelder	Program Technical Manager/Mission Director	29 June 2004
			Date
<u>Gaylord Green</u>	Gaylord Green	Program Manager	7/2/04
			Date
<u>Francis Everitt</u>	Francis Everitt	Principal Investigator	6/30/2004
			Date
<u>John Turneure</u>	John Turneure	Co-PI	30-Jun-04
			Date
<u>Robert Schultz</u>	Robert Schultz	Systems Engineering	6-30-04
			Date
<u>Anthony T Lyons</u>	Tony Lyons	MSFC	7/2/04
			Date
<u>Bill Bencze</u>	Bill Bencze	GSS/ARB	28 JUN 04
			Date
<u>Bruce Clarke</u>	Bruce Clarke	SRE	30 JUNE 2004
			Date
<u>Dave Hipkins</u>	Dave Hipkins	GSS	30 June 04
			Date
<u>Robert Brumley</u>	Robert Brumley	Gyro/GMA/ECU	1 July -04
			Date
<u>Sasha Buchman</u>	Sasha Buchman	Gyro	6/30/04
			Date
<u>Mac Keiser</u>	Mac Keiser	Science	6/29/04
			Date
<u>Marcie Smith</u>	Marcie Smith	Mission Operations	2 July 04
			Date
<u>Norm Bennett</u>	Norm Bennett	Spacecraft	7/2/04
			Date

Spin-up Waiver Form

#

Date: 2004:188:16:26:00

Originator: R. DeMoss

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System:

GSS2

Discrepancy requiring waiver:

- 1.) SY-IN+TmoFys-2 = 0060 (DOC HAS OK)
- 2.) PY-ATQPS-FUN012 = ENABLED (SW DISABLES)
- 3.) PY-UV-DIAS2 = ZERO-V (DOC HAS OK)
- 4.) PY-MISSIONMODE2 = SPIN-UP (DOC HAS SUM)
- 5.) PY-OUTRSTATE2 = SUM (DOC HAS SUM_LIST)
- 6.) PY-CHARGEATTEN2 = DISABLED (DOC HAS ENABLED)

7.) PY-gsspp Fa.12 = FAILED
SHOULD BE OK

Rationale:

- 1.) 0060, 1ST ZERO IS VERIFY
- 2.) SW DISABLES ATQ FILTER
- 3.) ENUM ZERO-V OK
- 4.) ENUM SPIN-UP OK
- 5.) ENUM SUM OK
6. DISABLED charge measurement is correct.
7. THIS is left over from multi bit ERROR FAILURE

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Rm

Approved?

Y

N

Flight Director

Approved?

Y

N

RE GSS

David R. Lytle

Approved?

Y

N

ARB Chair

Approved?

Y

N

Spin-up Waiver Form

#

Date: 2004/100-18:03 Z

Originator: W Growitz

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: SRE

Discrepancy requiring waiver:

SQ-BK12 Sensor 2A Exceeds limits

Rationale:

This is the back-up sensor. Primary sensor is being used & is within limits

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

RAM

Approved? Y N

Flight Director

ha

Approved? Y N

RE

Werner

Approved? Y N

ARB Chair

aw - R

Approved? Y N

Spin-up Waiver Form

#

Date: 7/16/04

Originator: CHRIS GRAY / Ken B. view

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 thru GP-14 is a negative value, limit is 0-1 psia
Rationale: Some pumps (the main coolant) operate at 0-1 psia, this is typical
and only occurs at the peak of the heating cycle.
GMA pressures are all nominal. Limits need
to be updated.

Recommend As Permanent Change?

☒ Y

☐ N

Concurrence:

Mission Director

Ray

Approved?

☒ Y

☐ N

Flight Director

MA

Approved?

☒ Y

☐ N

RE

Ray

Approved?

☒ Y

☐ N

ARB Chair

Ray

Approved?

☒ Y

☐ N

Spin-up Waiver Form

#

Date: 2004:188:15:55Z

Originator: NOM

Waiver For: 1Hz
(circle all that apply)

(5 Hz)

Full Spin

Sub-System: ECU

Discrepancy requiring waiver:

Vatterfly value indicator indicates F2, 50635
indicates F6. See 1 Hz waiver

Rationale: DE-Vacc-P9A-sig = -1710 DM
DE-Vacc-P9B-sig = -1130

[Signature] (Vatterfly values expected)

(P9-sig due to ~~expected~~
accepted degradation of HW)

Recommend As Permanent Change?

(Y)

N

changed in new 680

Concurrence:

Mission Director

[Signature]

Approved? (Y)

N

Flight Director

[Signature]

Approved? (Y)

N

RE

[Signature]

Approved? (Y)

N

ARB Chair

[Signature]

Approved? (Y)

N

Spin-up Waiver Form

#

Date: 2004:188:15:45Z

Originator: NOM

Waiver For: 1Hz
(circle all that apply)

(5 Hz)

Full Spin

Sub-System: ECW

Discrepancy requiring waiver:

Vatterfly value indicator indicates F2, 50635
indicates F6. See 1 Hz waiver

Rationale: DE-Vacg-P9A-sig = -1710 DM
DE-Vacg-P9B-sig = -1130

[Signature] (Vatterfly values expected)

(P9-sig due to ~~expected~~
accepted
degradation of HW)

Recommend As Permanent Change?

(Y)

N

changed in new 630

Concurrence:

Mission Director

[Signature]

Approved?

(Y)

N

Flight Director

[Signature]

Approved?

(Y)

N

RE

[Signature]

Approved?

(Y)

N

ARB Chair

[Signature]

Approved?

(Y)

N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation _____

Gyroscopes to be spun #2

<u>Barry Muhlfelder</u>	Program Technical Manager/Mission Director	<u>July 15, 2004</u>
Barry Muhlfelder		Date
<u>Gaylord B Green</u>	Program Manager	<u>15 Jul 2004</u>
Gaylord Green		Date
<u>Francis Everitt</u>	Principal Investigator	<u>15 July 2004</u>
Francis Everitt		Date
<u>John Turneure</u>	Co-PI	<u>15-Jul-04</u>
John Turneure		Date
<u>Robert Schultz</u>	Systems Engineering	<u>7-15-04</u>
Robert Schultz		Date
<u>Tony Lyons</u>	MSFC	<u>7-15-04</u>
Tony Lyons		Date
<u>Bill Bencze</u>	GSS/ARB	<u>15 JUL 04</u>
Bill Bencze		Date
<u>Bruce Clarke</u>	SRE	<u>15 Jul 04</u>
Bruce Clarke		Date
<u>Dave Hipkins</u>	GSS	<u>15 July 04</u>
Dave Hipkins		Date
<u>Robert Brumley</u>	Gyro/GMA/ECU	<u>July 15, 2004</u>
Robert Brumley		Date
<u>Not Required</u>		<u>7/15/04</u>
Sasha Buchman	Gyro	
		Date
<u>Mac Keiser</u>	Science	<u>July 15, 2004</u>
Mac Keiser		Date
<u>Marcie Smith</u>	Mission Operations	<u>15 July '04</u>
Marcie Smith		Date
<u>Norm Bennett</u>	Spacecraft	<u>7/15/04</u>
Norm Bennett		Date

Spin-up Waiver Form

#

Date: 2004:198:15:19

Originator:

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System: ECU

Discrepancy requiring waiver:

SM-GMAPres P9A is disabled
SM-GMAPres P9B is disabled

Rationale:

accuracy of P9A & P9B gage's suspect.

Recommend As Permanent Change?

☒ Y ☐ N

Concurrence:

Mission Director

R. M. M.

Approved? Y N

Flight Director

D. J. J.

Approved? ☒ Y ☐ N

RE

H. M. M.

Approved? ☒ Y ☐ N

ARB Chair

A. R. D.

Approved? ☒ Y ☐ N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation _____

Gyroscopes to be spun #3 Full spin

<u>Barry Muhl</u>		<u>July 15, 2004</u>
Barry Muhlfelder	Program Technical Manager/Mission Director	Date
<u>Gaylord B. Green</u>		<u>15 Jul 2004</u>
Gaylord Green	Program Manager	Date
<u>Francis Everitt</u>		<u>7/15/04</u>
Francis Everitt	Principal Investigator	Date
<u>John P. Turneaure</u>		<u>15-Jul-04</u>
John Turneaure	Co-PI	Date
<u>Robert Schultz</u>		<u>7-15-04</u>
Robert Schultz	Systems Engineering	Date
<u>Anthony T. Lyons</u>		<u>7-15-04</u>
Tony Lyons	MSFC	Date
<u>Bill Bencze</u>		<u>15 JUL 04</u>
Bill Bencze	GSS/ARB	Date
<u>Bruce Clarke</u>		<u>15-JUL-04</u>
Bruce Clarke	SRE	Date
<u>Dave Hipkins</u>		<u>15-July-04</u>
Dave Hipkins	GSS	Date
<u>Robert Brumley</u>		<u>15-Jul-04</u>
Robert Brumley	Gyro/GMA/ECU	Date
<u>Sasha Buchman</u>		<u>July 15, 2004</u>
Sasha Buchman	Gyro	Date
<u>Mac Keiser</u>		<u>July 15, 2004</u>
Mac Keiser	Science	Date
<u>Marcie Smith</u>		<u>15 July '04</u>
Marcie Smith	Mission Operations	Date
<u>Norm Bennett</u>		<u>7/15/04</u>
Norm Bennett	Spacecraft	Date

Spin-up Waiver Form

#

Date: 2004:210:15:45 Z

Originator: R. DeMars

Waiver For: 1Hz
(circle all that apply)

5 Hz 10Hz Full Spin

Sub-System:

GSS 3

Discrepancy requiring waiver:

MONITOR = PG_SU_R_Cnd - 3 = RADIAL POS 1

Rationale:

New TEMPLATES SET RADIAL POSITION TO ONE
INSTEAD OF ~~THE~~ PREVIOUS 3 (IN DOC APP C).

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Berry

Approved? Y N

Flight Director

DeMars

Approved? Y N

RE GSS

DeMars

Approved? Y N

ARB Chair

W. J. R.

Approved? Y N

Spin-up Waiver Form

#

Date: ~~2004:198:15:19~~

2004:210:15:59

Originator:

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System: ECW

Discrepancy requiring waiver:

SM-GMAPres P9A is disabled

SM-GMAPres P9B is disabled

Rationale:

accuracy of P9A & P9B gage's suspect.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Rum

Approved?

Y

N

Flight Director

FIS

Approved?

Y

N

RE

UOMerweather

Approved?

Y

N

ARB Chair

ar - m

Approved?

Y

N

Spin-up Waiver Form

#

Date: 7/28/04

Originator: Ken Bowen

Waiver For: 1Hz
(circle all that apply)

5 Hz

+

Full Spin

SAME DAY

Sub-System: GMA

Discrepancy requiring waiver:

SOME GMA THERMOMETERS JUST OVER $+20^{\circ}\text{C}$ SPEC.
THIS IS NORMAL PERFORMANCE AT THE TOP OF THE HEATING/
COOLING CYCLE.

Rationale:

SPEC SHOULD BE CHANGED TO $+25^{\circ}\text{C}$
CURRENT SPEC IS $+0^{\circ}-+20^{\circ}\text{C}$. HARDWARE REQ'S IS $-49^{\circ}\text{C}-+51^{\circ}\text{C}$.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director



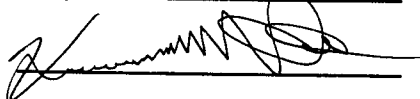
Approved? Y N

Flight Director



Approved? Y N

RE



Approved? Y N

ARB Chair

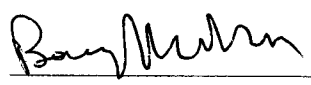
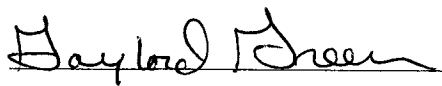
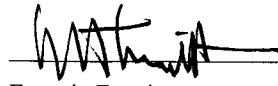
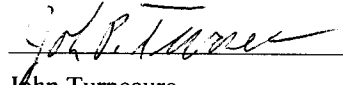
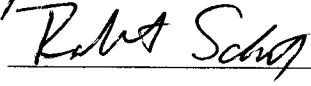
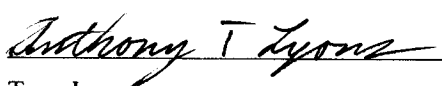
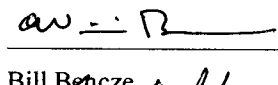
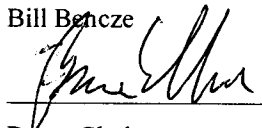
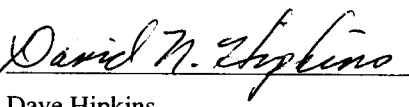
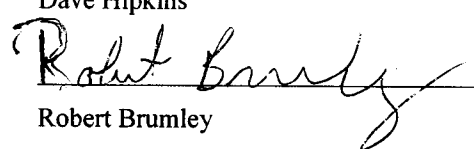
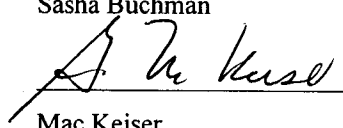
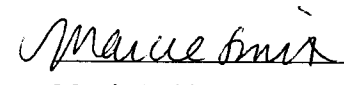
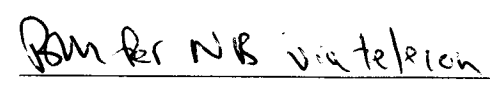


Approved? Y N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation _____

Gyroscopes to be spun #4

		7/11/04
Barry Muhlfelder	Program Technical Manager/Mission Director	Date
		7/12/04
Gaylord Green	Program Manager	Date
		7/12/04
Francis Everitt	Principal Investigator	Date
		07/09/04
John Turneure	Co-PI	Date
		7/12/04
Robert Schultz	Systems Engineering	Date
		7/12/04
Tony Lyons	MSFC	Date
		12 JUL 04
Bill Benche	GSS/ARB	Date
		7/12/04
Bruce Clarke	SRE	Date
		7/11/04
Dave Hipkins	GSS	Date
		7/12/04
Robert Brumley	Gyro/GMA/ECU	Date
		7/12/04
Sasha Buchman	Gyro	Date
		7/12/04
Mac Keiser	Science	Date
		12 July 04
Marcie Smith	Mission Operations	Date
		12 July 04
Norm Bennett	Spacecraft	Date

Spin-up Waiver Form

#

Date: 7/13/04

Originator: Chris Gerny

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System: GMA

Discrepancy requiring waiver:

Appendix D - Temperature exceeded for GMA-SDT-2A
GMA-SDT-2B
GMA-SDT-3A

All are ~ 0.5°K over limit.
(294 W)

Rationale:

GMA stable to 40°C, not a problem
Safe

Recommend As Permanent Change?

☒ Y

N

Concurrence:

Mission Director

Roll

Approved? ☒ Y

N

Flight Director

J. L. S.

Approved? ☒ Y

N

RE

Chris Gerny

Approved? ☒ Y

☒ N CSB

ARB Chair

W. B.

Approved? ☒ Y

N

Spin-up Waiver Form

#

Date: 2004-10-5 / 16:34 Z

Originator:

Werner G. G. J.

Waiver For:

1 Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System:

SRE

Discrepancy requiring waiver:

Scrub Range is at 1, not 3
as specified.

Rationale:

Scrub data is well within ~~range~~ range
at current settings of 1.

Recommend As Permanent Change?

☒ Y

N

Concurrence:

Mission Director

R. M.

Approved?

☒ Y

N

Flight Director

J. A. G.

Approved?

☒ Y

N

RE

Werner G. G. J.

Approved?

☒ Y

N

ARB Chair

A. R.

Approved?

☒ Y

N

Spin-up Waiver Form

#

Date: 195:16:07

Originator: WDM

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System:

ECU

Discrepancy requiring waiver:

Pressure - Calibrated P9B pressure
SM - GMAPres P9B (Safemode test) disabled

Rationale:

P9 Vac gage's not accurate enough to
rely upon halting spinup

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

[Signature]

Approved?

Y

N

Flight Director

[Signature]

Approved?

Y

N

RE

[Signature]

Approved?

Y

N

ARB Chair

[Signature]

Approved?

Y

N

Spin-up Waiver Form

#

Date: 2004:184:22:45

Originator: NDM

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System: ECW

Discrepancy requiring waiver:

DE-Vacg-P9A-Sig = -1040
" " -P9B-Sig = -1718

Rationale:

~~calibration~~ updated, raw value decreasing
as P9 gage degrades. Calibration updated
to account.

Recommend As Permanent Change?

(Y)

N

Concurrence:

Mission Director

BN

Approved?

(Y)

N

Flight Director

BN

Approved?

(Y)

N

RE

NDM

Approved?

(Y)

N

ARB Chair

BN

Approved?

(Y)

N

Spin-up Waiver Form

#

Date: 7/2/04

Originator: CHRIS GRAY/K. BOWEN

Waiver For: 1Hz (5 Hz) Full Spin
(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 then GP-14 is a negative value, limit is 0-1 psia

Rationale:

GMA pressures are all nominal. Limits need to be updated.

Recommend As Permanent Change? (Y) N

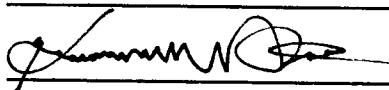
Concurrence:

Mission Director



Approved? (Y) N

Flight Director



Approved? (Y) N

RE



Approved? (Y) N

ARB Chair

Approved? (Y) N

Spin-up Waiver Form

#

Date: 2004:184:22:03

Originator: RAYMOND FONTECHA

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: GSS 3

Discrepancy requiring waiver:

- 1) SY-INTMOFLGS-3 = 0060 (DOC HAS OK)
- 2) PY-ATCPSFLNBL-3 = ENABLED (DOC HAS DISABLED)
- 3) PY-UKBIAS3 = ZERO-V (DOC HAS 0V)
- 4) PY-MISSIONMODE-3 = SPIN-UP (DOC HAS SUM-~~UP~~)
- 5) PY-CONTALSTATE-B = SUM (DOC HAS SUM-LIFT)
- 6) PY-CHGMTFLTEN3 IS DISABLED (DOC HAS ENABLED)

Rationale:

- 1) 0060 IS CORRECT, 1ST ^{ZERO} VALUE IS VALUE
- 2) ENABLED IS CORRECT, SW DISABLED
- 3) ZERO-V IS CORRECT ENUM
- 4) SPIN-UP " " "
- 5) SUM " " "
- 6) DISABLED IS CORRECT, CHARGE MEASUREMENT IS DISABLED

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

[Signature]

Approved? Y N

Flight Director

[Signature]

Approved? Y N

RE GSS

[Signature]

Approved? Y N

ARB Chair

Approved? Y N

Spin-up Waiver Form

#

Date: 2004:184:15:49

Originator: R. DeMars

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System:

GSS 1

Discrepancy requiring waiver:

- | | | | |
|--------------------|-----------|--------------------|---|
| 1) SY_INTMOFLGS-1 | = 0060 | (DOC HAS OK) | } 6) PY_CHG MT ALTERN 1
IS DISABLED
(DOC HAS ENABLED) |
| 2) PY_ATCPS FLNBL1 | = ENABLED | (DOC HAS DISABLED) | |
| 3) PY_UV_bias1 | = ZERO-V | (DOC HAS 0V) | |
| 4) PY_MISSIONMODE1 | = SPIN-UP | (DOC HAS SUM) | |
| 5) PY_CWTR/STATE-1 | = SUM | (DOC HAS SUM-LIFT) | |

Rationale:

- 1) 0060 is correct, 1st ZERO IS VALUE
- 2) ENABLED is correct, SW DISABLES
- 3) ZERO-V is correct ENUM
- 4) SPIN-UP is correct ENUM
- 5) SUM is correct ENUM
- 6) DISABLED is correct, CHARGE MEASUREMENT IS DISABLED

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

Ron

Approved?

Y

N

Flight Director

RN

Approved?

Y

N

RE GSS

[Signature]

Approved?

Y

N

ARB Chair

Approved?

Y

N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation 5 July, 2004

Gyroscopes to be spun 3

5 Hz spin-up
29 June, 2004

Barry Muhlfelder

Barry Muhlfelder

Program Technical Manager/Mission Director

Date

Gaylord Green

Gaylord Green

Program Manager

Date

Francis Everitt

Francis Everitt

Principal Investigator

Date

John Turneaure

John Turneaure

Co-PI

Date

Robert Schultz

Robert Schultz

Systems Engineering

Date

Anthony T Lyons

Tony Lyons

MSFC

Date

Bill Bencze

Bill Bencze

GSS/ARB

Date

Bruce Clarke

Bruce Clarke

SRE

Date

Dave N. Hipkins

Dave Hipkins

GSS

Date

Robert Brumley

Robert Brumley

Gyro/GMA/ECU

Date

Sasha Buchman

Sasha Buchman

Gyro

Date

Mac Keiser

Mac Keiser

Science

Date

Marcie Smith

Marcie Smith

Mission Operations

Date

Norm Bennett

Norm Bennett

Spacecraft

Date

7/2/04

6/30/2004

30-Jun-04

6-30-04

7/2/04

28 JUN 04

30 JUNE 2004

30 June 04

1-July-04

6/30/04

6/29/04

2 July 04

7/2/04

Spin-up Waiver Form

#

Date: 2004/188 - 23:44

Originator:

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System:

SRE

Discrepancy requiring waiver:

SQUID 4 is in
Range 1 vice Range 3.

Rationale:

Range 1 provides better
resolution for SQUID 4 (which ~~v/phi~~
v/phi is
different than
SQUID 1-3)

Recommend As Permanent Change? Y N

Concurrence:

Mission Director



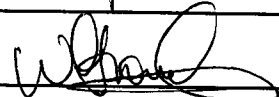
Approved? Y N

Flight Director



Approved? Y N

RE



Approved? Y N

ARB Chair

Approved? Y N

Spin-up Waiver Form

#

Date: 2004/183-23:00

Originator: Warner Grouitz

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System: SRE

Discrepancy requiring waiver:

Snapshots configured for 1KHz, however, FIXEDTRIM selector is configured for GSS. ~~not~~ no trim (snapshot) data will be downlinked.

Data available in Playback

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

RM

Approved? Y N

Flight Director

Rd Neill

Approved? Y N

RE

Warner Grouitz

Approved? Y N

ARB Chair

Warner Grouitz

Approved? Y N

Spin-up Waiver Form

#

Date: 2004:188:21:45

Originator: R. DeMaris

Waiver For: 1Hz
(circle all that apply)

5 Hz

Full Spin

Sub-System:

GSS 4

Discrepancy requiring waiver:

1. SY_INTMOFigs_4 = 0060 (DOC HAS OK)
2. PY_ATCPSFLN614 = ENABLED (DOC HAS DISABLE)
3. PY_UVbins4 = ZERO_V (DOC HAS 0V)
4. PY_MISSIONMODE4 = SPIN-UP (DOC HAS SUM)
5. PY_CNTRLSTATE4 = SUM (DOC HAS SUM-LIFT)
6. PY_CHGINTFLTRN4 = DISABLED (DOC HAS ENABLED)

Rationale:

1. 0060, 1ST ZERO is verify
2. SW DISABLES ATC FILTER
3. ENUM ZERO_V OK
4. ENUM SPIN-UP OK
5. ENUM SUM OK
6. DISABLED CHARGE MEASUREMENT is OK.

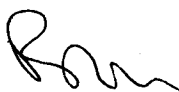
Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director



Approved?

☒ Y

N

Flight Director



Approved?

☒ Y

N

RE GSS

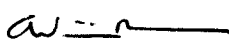


Approved?

☒ Y

N

ARB Chair



Approved?

☒ Y

N

Spin-up Waiver Form

#

Date:

7/6/04

Originator:

CHRIS GRAY, Ken River

Waiver For:

1Hz

5 Hz

Full Spin

(circle all that apply)

Sub-System:

GMA

Discrepancy requiring waiver:

GP-4 value is greater than the 20 psia limit
GP-5 value is greater than the 20 psia limit
GP-6 thru GP-14 is a negative value, limit is 0-1 psia

Rationale:

GMA pressures are all nominal. Limits need to be updated.

Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

[Signature]

Approved?

Y

N

Flight Director

[Signature]

Approved?

Y

N

RE

[Signature]

Approved?

Y

N

ARB Chair

[Signature]

Approved?

Y

N

Spin-up Waiver Form

#

Date: 2004:207:16:25

Originator: KDM

Waiver For:

(circle all that apply)

1Hz

5 Hz

Full Spin

Sub-System:

ECU

Discrepancy requiring waiver:

SM-GMAPresP9A disabled

SM-GMAPresP9B

Rationale:

P9 gage accuracy is questionable

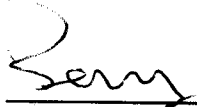
Recommend As Permanent Change?

Y

N

Concurrence:

Mission Director

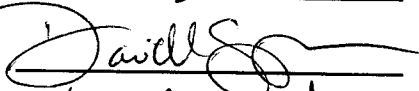


Approved?

Y

N

Flight Director

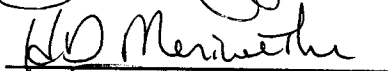


Approved?

Y

N

RE

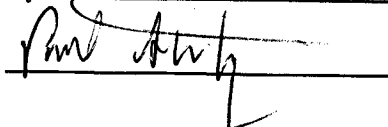


Approved?

Y

N

ARB Chair



Approved?

Y

N

Spin-up Waiver Form

#

Date: 7/25/04

Originator: Ken Bowen

Waiver For: 1Hz 5 Hz Full Spin
(circle all that apply)

Sub-System: GMA

Discrepancy requiring waiver:

SOME SOT'S JUST OVER 20°C SPEC. ~~IT'S~~

Rationale:

THIS IS NORMAL BEHAVIOUR. AT THE TOP OF THE HEATLACK CYCLE, ALL GMA SOT'S EXCEED 20°C BY 1-2°. SPEC'S SHOULD BE CHANGED TO 25°C.

Recommend As Permanent Change? Y N

Concurrence:

Mission Director

Berry

Approved? Y N

Flight Director

Dan Allen

Approved? Y N

RE

[Signature]

Approved? Y N

ARB Chair

[Signature]

Approved? Y N

Coordination/Signoff Sheet (Item #5 of S1007)

Date of Spinup Operation July 2004

SHZ.

Gyroscopes to be spun 4

Barry Muhl

29 June 2004

Barry Muhlfelder

Program Technical Manager/Mission Director

Date

Gaylord Green

7/2/04

Gaylord Green

Program Manager

Date

Francis Everitt

6/30/2004

Francis Everitt

Principal Investigator

Date

John Turneure

30-June-04

John Turneure

Co-PI

Date

Robert Schultz

6-30-04

Robert Schultz

Systems Engineering

Date

Anthony T Lyons

7/2/04

Tony Lyons

MSFC

Date

Bill Bencze

29 JUN 04

Bill Bencze

GSS/ARB

Date

Bruce Clarke

30 JUNE 2004

Bruce Clarke

SRE

Date

Dave Hipkins

30 June 04

Dave Hipkins

GSS

Date

Robert Brumley

1-July-04

Robert Brumley

Gyro/GMA/ECU

Date

Sasha Buchman

6/30/04

Sasha Buchman

Gyro

Date

Mac Keiser

6/29/04

Mac Keiser

Science

Date

Marcie Smith

2 July 04

Marcie Smith

Mission Operations

Date

Norm Bennett

7/2/2004

Norm Bennett

Spacecraft

Date

Spin-up Waiver Form

#

Date: 2004:180:25:55Z

Originator: NOM

Waiver For: 1Hz
(circle all that apply)

(5 Hz)

Full Spin

Sub-System: ECU

Discrepancy requiring waiver:

Butterfly valve indicator indicates F2, SO635
indicates F6. See 180 waiver

Rationale: DE-Vacg-P9A-sig = -1710 DM
DE-Vacg-P9A-Sig = -1130

[Signature] (Butterfly valves expected)

(P9-sig due to ~~expected~~
accepted degradation of HW)

Recommend As Permanent Change?

(Y) N

changed in new 630

Concurrence:

Mission Director

[Signature]

Approved? (Y) N

Flight Director

[Signature]

Approved? (Y) N

RE

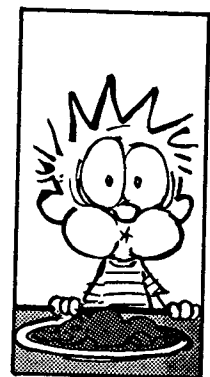
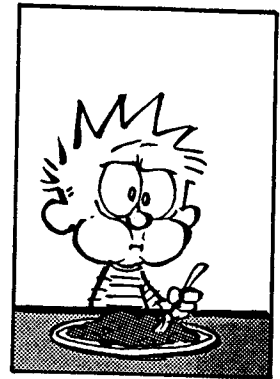
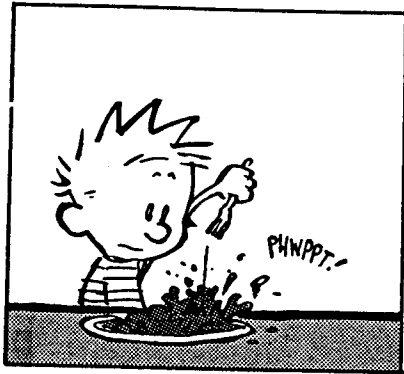
[Signature]

Approved? (Y) N

ARB Chair

[Signature]

Approved? Y N



GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144595651

Sun Aug 1 01:26:59 2004

Page End: 144598751

Sun Aug 1 02:18:39 2004

Page 1

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	001	214:01:26:59->214:02:31:40	144595651	ORB	G		Begin GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 < 0					
	002	214:02:00:00->214:15:00:00	144597632	PON	G		Begin 182					
	003	214:02:00:02->214:02:01:42	144597634	GND	G		PONG182 32k 216 IOC					
	004	214:02:00:17->214:02:00:37	144597649	CDH	C	7497	Select slot5 for 32K SSR					
Notes:							___ Log_Event_108/na=logged					
	005	214:02:01:57->214:02:02:27	144597749	SRE	C	7498	Optimize SQ HChk db for HChk yellow					
Notes:							___ Log_Event_034/na=logged					
	006	214:02:02:29->214:02:02:39	144597781	SRE	C	7499	Enable SQUID Health Checks					
Notes:							___ Log_Event_117/na=logged					
	007	214:02:04:50->214:02:05:15	144597922	SRE	C	7500	guide star valid no snaps					
Notes:							___ Log_Event_240/na=logged					
	008	214:02:09:50->214:03:06:16	144598222	ORB	G		Begin Guide Star Valid					
	009	214:02:14:50->214:02:15:10	144598522	SRE	C	7501	SRE Snapshot Disable					
Notes:							___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0)					
							___ Log_Event_110/na=logged					
	010	214:02:15:12->214:02:15:36	144598544	TRE	C	7502	ST Type3 Snapshot Enable					
Notes:							___ Log_Event_103/na=logged					
	011	214:02:18:39->214:02:27:39	144598751	CDH	C	7503	CCCA DB readout Part1					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144599293

Sun Aug 1 02:27:41 2004

Page End: 144601308

Sun Aug 1 03:01:16 2004

Page 2

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
		Notes:	____ Log_Event_254/na=logged									
	012	214:02:27:41->214:02:35:31	144599293	CDH	C	7504	CCCA DB readout Part3					
		Notes:	____ Log_Event_254/na=logged									
	013	->214:02:31:40	144599532	ORB	G		End GPB in Sunlight					
		Notes:	@*+ Battery 1 charge status/IW_Bat_1 > 0									
	014	214:02:32:46->214:02:32:56	144599598	CDH	C	7505	Xpndr 125 m2					
	015	214:02:32:58->214:02:33:08	144599610	CDH	C	7506	transmit A fwd					
		Notes:	____ Log_Event_210/na=logged									
	016	214:02:33:13->214:02:58:00	144599625	GND	G		SN NON COHO FWD					
	017	214:02:33:13->214:02:58:00	144599625	ORB	G		Begin TDRSS in contact with GPB					
	018	214:02:42:31->214:02:59:51	144600183	ORB	G		Begin GPB over South Atlantic Anomaly					
	019	->214:02:58:00	144601112	ORB	G		End TDRSS in contact with GPB					
	020	214:02:58:05->214:02:58:15	144601117	CDH	C	7507	transmit off					
		Notes:	____ Log_Event_212/na=logged									
	021	214:02:58:17->214:02:58:27	144601129	CDH	C	7508	Xpndr 2000 m1					
	022	->214:02:59:51	144601223	ORB	G		End GPB over South Atlantic Anomaly					
	023	214:03:01:16->214:03:01:36	144601308	TRE	C	7509	ST Disable Snapshots					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page 21

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
Notes: _____ Log_Event_212/na=logged												
	212	214:14:50:07->214:14:51:07	144643839	GND	G		Confirm GN Voice Line Configured					
	213	->214:14:55:22	144644154	ORB	G		End GPB over South Atlantic Anomaly					
	214	->214:15:00:00	144644432	PON	G		End 182					
	215	->214:15:32:46	144646398	ORB	G		End GPB in Sunlight					
Notes: @*+ Battery 1 charge status/IW_Bat_1 > 0												

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144601330

Sun Aug 1 03:01:38 2004

Page End: 144602432

Sun Aug 1 03:20:00 2004

Page 3

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
							Notes:					
							____ Log_Event_100/na=logged					
							____ SnapshotMode/none=none					
	024	214:03:01:38->214:03:02:02	144601330	SRE	C	7510	SRE 1KHz SnapshotR Enable					
							Notes:					
							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)					
							@*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1)					
							____ Log_Event_115/na=logged					
	025	214:03:02:39->214:03:02:44	144601391	SRE	C	7511	Disable SQUID Health Checks					
							Notes:					
							____ Log_Event_118/na=logged					
	026	214:03:02:59->214:03:03:29	144601411	SRE	C	7512	Optimize SQ HChk db for SQ Init					
							Notes:					
							____ Log_Event_054/na=logged					
	027	214:03:04:37->214:04:09:18	144601509	ORB	G		Begin GPB in Sunlight					
							Notes:					
							@*+ Battery 1 charge status/IW_Bat_1 < 0					
	028	->214:03:06:16	144601608	ORB	G		End Guide Star Valid					
	029	214:03:11:16->214:03:12:06	144601908	SRE	C	7513	guide star invalid with SRE snapshot					
							Notes:					
							____ Log_Event_245/na=logged					
	030	214:03:19:45->214:03:19:55	144602417	CDH	C	7514	transmit B aft					
							Notes:					
							____ Log_Event_211/na=logged					
	031	214:03:20:00->214:03:45:00	144602432	GND	G		SN COHO AFT					
	032	214:03:20:00->214:03:45:00	144602432	ORB	G		Begin TDRSS in contact with GPB					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144642602

Sun Aug 1 14:29:30 2004

Page End: 144643687

Sun Aug 1 14:47:35 2004

Page 20

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	201	214:14:29:30->214:14:47:30	144642602	ORB	G		Begin TDRSS in contact with GPB					
	202	->214:14:29:50	144642622	ORB	G		End Guide Star Valid					
	203	214:14:34:50->214:14:35:40	144642922	SRE	C	7609	guide star invalid with SRE snapshot					
Notes:							___ Log_Event_245/na=logged					
	204	214:14:37:36->214:14:55:22	144643088	ORB	G		Begin GPB over South Atlantic Anomaly					
	205	214:14:38:00->214:14:38:50	144643112	SRE	C	7610	Adjust target normal FFT1					
Notes:							___ Log_Event_099/na=logged					
	206	214:14:38:52->214:14:39:42	144643164	SRE	C	7611	Adjust target normal FFT2					
Notes:							___ Log_Event_099/na=logged					
	207	214:14:39:44->214:14:40:34	144643216	SRE	C	7612	Adjust target normal FFT3					
Notes:							___ Log_Event_099/na=logged					
	208	214:14:40:36->214:14:41:26	144643268	SRE	C	7613	Adjust target normal FFT4					
Notes:							___ Log_Event_099/na=logged					
	209	214:14:45:00->214:14:50:00	144643532	FSW	C	7614	Idle 05 minutes					
Notes:							___ Log_Event_044/na=logged					
	210	->214:14:47:30	144643682	ORB	G		End TDRSS in contact with GPB					
	211	214:14:47:35->214:14:47:45	144643687	CDH	C	7615	transmit off					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144603601

Sun Aug 1 03:39:29 2004

Page End: 144604757

Sun Aug 1 03:58:45 2004

Page 4

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	033	214:03:39:29->214:03:40:39	144603601	TRE	C	7515	ST DMA Bal Appl Mode0 Enable					
Notes:							___ Log_Event_031/na=logged					
	034	214:03:40:41->214:03:41:51	144603673	TRE	C	7516	ST DMA Bal Mode1 HG Enable					
Notes:							___ Log_Event_033/na=logged					
	035	214:03:42:29->214:03:42:54	144603781	SRE	C	7517	guide star valid no snaps					
Notes:							___ Log_Event_240/na=logged					
	036	->214:03:45:00	144603932	ORB	G		End TDRSS in contact with GPB					
	037	214:03:45:05->214:03:45:15	144603937	CDH	C	7518	transmit off					
Notes:							___ Log_Event_212/na=logged					
	038	214:03:47:29->214:04:43:55	144604081	ORB	G		Begin Guide Star Valid					
	039	214:03:52:29->214:03:52:49	144604381	SRE	C	7519	SRE Snapshot Disable					
Notes:							___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0) ___ Log_Event_110/na=logged					
	040	214:03:52:51->214:03:53:15	144604403	TRE	C	7520	ST Type3 Snapshot Enable					
Notes:							___ Log_Event_103/na=logged					
	041	214:03:58:33->214:03:58:43	144604745	CDH	C	7521	Xpndr 125 m2					
	042	214:03:58:45->214:03:58:55	144604757	CDH	C	7522	transmit A fwd					
Notes:							___ Log_Event_210/na=logged					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144639752

Sun Aug 1 13:42:00 2004

Page End: 144642602

Sun Aug 1 14:29:30 2004

Page 19

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	191	214:13:42:00->214:14:07:00	144639752	ORB	G		Begin TDRSS in contact with GPB					
	192	->214:13:55:08	144640540	ORB	G		End GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	193	->214:14:07:00	144641252	ORB	G		End TDRSS in contact with GPB					
	194	214:14:07:05->214:14:07:15	144641257	CDH	C	7604	transmit off					
Notes:							___ Log_Event_212/na=logged					
	195	214:14:07:17->214:14:07:27	144641269	CDH	C	7605	Xpndr 2000 m1					
	196	214:14:24:50->214:14:25:10	144642322	TRE	C	7606	ST Disable Snapshots					
Notes:							___ Log_Event_100/na=logged					
							___ SnapshotMode/none=none					
	197	214:14:25:12->214:14:25:36	144642344	SRE	C	7607	SRE 1KHz SnapshotR Enable					
Notes:							___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)					
							@*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1)					
							___ Log_Event_115/na=logged					
	198	214:14:28:09->214:15:32:46	144642521	ORB	G		Begin GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 < 0					
	199	214:14:29:15->214:14:29:25	144642587	CDH	C	7608	transmit B aft					
Notes:							___ Log_Event_211/na=logged					
	200	214:14:29:30->214:14:47:30	144642602	GND	G		SN COHO AFT					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144604772

Sun Aug 1 03:59:00 2004

Page End: 144606048

Sun Aug 1 04:20:16 2004

Page 5

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	043	214:03:59:00->214:04:24:00	144604772	GND	G		SN NON COHO FWD					
	044	214:03:59:00->214:04:24:00	144604772	ORB	G		Begin TDRSS in contact with GPB					
	045	->214:04:09:18	144605390	ORB	G		End GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	046	214:04:19:00->214:04:19:05	144605972	SCE	C	7523	open shutter					
Notes:							___ SACE_A_Shutter_Closed/BP_SHUT_A_CL=Not_Closed(1) ___ SACE_A_Shutter_Open/BP_SHUT_A_OP=Open(0) ___ SACE_B_Shutter_Closed/BP_SHUT_B_CL=Not_Closed(1) ___ SACE_B_Shutter_Open/BP_SHUT_B_OP=Open(0) ___ Log_Event_254/na=logged ___ Log_Event_101/none=logged					
	047	214:04:19:07->214:04:19:28	144605979	FSW	C	7524	Mask Enable SRE Aliveness 10Hz Test					
Notes:							___ Log_Event_162/na=logged					
	048	214:04:19:24->214:04:38:03	144605996	ORB	G		Begin GPB over South Atlantic Anomaly					
	049	214:04:19:30->214:04:19:51	144606002	FSW	C	7525	Mask Enable SRE Aliveness 1Hz Test					
Notes:							___ Log_Event_146/na=logged					
	050	214:04:19:53->214:04:20:14	144606025	FSW	C	7526	Mask Enable SRE TRE PP RsbIs Test					
Notes:							___ Log_Event_190/na=logged					
	051	214:04:20:16->214:04:20:37	144606048	FSW	C	7527	Mask Enable ECU Aliveness Test					
Notes:							___ Log_Event_156/na=logged					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144636763

Sun Aug 1 12:52:11 2004

Page End: 144639752

Sun Aug 1 13:42:00 2004

Page 18

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
		Notes:	@*+ Battery 1 charge status/IW_Bat_1 < 0									
	180	->214:12:52:11	144636763	ORB	G		End Guide Star Valid					
	181	214:12:57:11->214:12:58:01	144637063	SRE	C	7598	guide star invalid with SRE snapshot					
		Notes:	___ Log_Event_245/na=logged									
	182	214:13:01:30->214:13:12:29	144637322	ORB	G		Begin GPB over South Atlantic Anomaly					
	183	->214:13:12:29	144637981	ORB	G		End GPB over South Atlantic Anomaly					
	184	214:13:28:24->214:13:28:49	144638936	SRE	C	7599	guide star valid no snaps					
		Notes:	___ Log_Event_240/na=logged									
	185	214:13:33:24->214:14:29:50	144639236	ORB	G		Begin Guide Star Valid					
	186	214:13:38:24->214:13:38:44	144639536	SRE	C	7600	SRE Snapshot Disable					
		Notes:	___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0) ___ Log_Event_110/na=logged									
	187	214:13:38:46->214:13:39:10	144639558	TRE	C	7601	ST Type3 Snapshot Enable					
		Notes:	___ Log_Event_103/na=logged									
	188	214:13:41:33->214:13:41:43	144639725	CDH	C	7602	Xpndr 125 m2					
	189	214:13:41:45->214:13:41:55	144639737	CDH	C	7603	transmit A fwd					
		Notes:	___ Log_Event_210/na=logged									
	190	214:13:42:00->214:14:07:00	144639752	GND	G		SN NON COHO FWD					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144606071

Sun Aug 1 04:20:39 2004

Page End: 144607368

Sun Aug 1 04:42:16 2004

Page 6

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	052	214:04:20:39->214:04:20:49	144606071	FSW	C	7528	Set QBS Safemode limit 5K					
Notes:							___ Log_Event_022/na=logged					
	053	->214:04:24:00	144606272	ORB	G		End TDRSS in contact with GPB					
	054	214:04:24:05->214:04:24:15	144606277	CDH	C	7529	transmit off					
Notes:							___ Log_Event_212/na=logged					
	055	214:04:24:17->214:04:24:27	144606289	CDH	C	7530	Xpndr 2000 m1					
	056	->214:04:38:03	144607115	ORB	G		End GPB over South Atlantic Anomaly					
	057	214:04:38:55->214:04:39:15	144607167	TRE	C	7531	ST Disable Snapshots					
Notes:							___ Log_Event_100/na=logged ___ SnapshotMode/none=none					
	058	214:04:39:17->214:04:39:41	144607189	SRE	C	7532	SRE 1KHz SnapshotR Enable					
Notes:							___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1) @*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1) ___ Log_Event_115/na=logged					
	059	214:04:41:45->214:04:41:55	144607337	CDH	C	7533	transmit B aft					
Notes:							___ Log_Event_211/na=logged					
	060	214:04:42:00->214:05:07:00	144607352	GND	G		SN COHO AFT					
	061	214:04:42:00->214:05:07:00	144607352	ORB	G		Begin TDRSS in contact with GPB					
	062	214:04:42:16->214:05:46:57	144607368	ORB	G		Begin GPB in Sunlight					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144634682

Sun Aug 1 12:17:30 2004

Page End: 144636663

Sun Aug 1 12:50:31 2004

Page 17

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	169	->214:12:17:30	144634682	ORB	G		End GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	170	214:12:17:33->214:12:17:43	144634685	CDH	C	7592	Xpndr 125 m2					
	171	214:12:17:45->214:12:17:55	144634697	CDH	C	7593	transmit A fwd					
Notes:							____ Log_Event_210/na=logged					
	172	214:12:18:00->214:12:43:00	144634712	GND	G		SN NON COHO FWD					
	173	214:12:18:00->214:12:43:00	144634712	ORB	G		Begin TDRSS in contact with GPB					
	174	->214:12:43:00	144636212	ORB	G		End TDRSS in contact with GPB					
	175	214:12:43:05->214:12:43:15	144636217	CDH	C	7594	transmit off					
Notes:							____ Log_Event_212/na=logged					
	176	214:12:43:17->214:12:43:27	144636229	CDH	C	7595	Xpndr 2000 m1					
	177	214:12:47:11->214:12:47:31	144636463	TRE	C	7596	ST Disable Snapshots					
Notes:							____ Log_Event_100/na=logged					
							____ SnapshotMode/none=none					
	178	214:12:47:33->214:12:47:57	144636485	SRE	C	7597	SRE 1KHz SnapshotR Enable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)					
							@*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1)					
							____ Log_Event_115/na=logged					
	179	214:12:50:31->214:13:55:08	144636663	ORB	G		Begin GPB in Sunlight					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144607467

Sun Aug 1 04:43:55 2004

Page End: 144610817

Sun Aug 1 05:39:45 2004

Page 7

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
Notes:							@*+ Battery 1 charge status/IW_Bat_1 < 0					
	063	->214:04:43:55	144607467	ORB	G		End Guide Star Valid					
	064	214:04:48:55->214:04:49:45	144607767	SRE	C	7534	guide star invalid with SRE snapshot					
Notes:							____ Log_Event_245/na=logged					
	065	->214:05:07:00	144608852	ORB	G		End TDRSS in contact with GPB					
	066	214:05:07:05->214:05:07:15	144608857	CDH	C	7535	transmit off					
Notes:							____ Log_Event_212/na=logged					
	067	214:05:20:08->214:05:20:33	144609640	SRE	C	7536	guide star valid no snaps					
Notes:							____ Log_Event_240/na=logged					
	068	214:05:25:08->214:06:21:34	144609940	ORB	G		Begin Guide Star Valid					
	069	214:05:30:08->214:05:30:28	144610240	SRE	C	7537	SRE Snapshot Disable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0)					
							____ Log_Event_110/na=logged					
	070	214:05:30:30->214:05:30:54	144610262	TRE	C	7538	ST Type3 Snapshot Enable					
Notes:							____ Log_Event_103/na=logged					
	071	214:05:39:33->214:05:39:43	144610805	CDH	C	7539	Xpndr 125 m2					
	072	214:05:39:45->214:05:39:55	144610817	CDH	C	7540	transmit A fwd					
Notes:							____ Log_Event_210/na=logged					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144610832

Sun Aug 1 05:40:00 2004

Page End: 144613026

Sun Aug 1 06:16:34 2004

Page 8

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	073	214:05:40:00->214:06:02:00	144610832	GND	G		SN NON COHO FWD					
	074	214:05:40:00->214:06:02:00	144610832	ORB	G		Begin TDRSS in contact with GPB					
	075	214:05:41:00->214:05:41:05	144610892	ECU	C	7541	Turn LV1 Heater Off					
Notes:							____ Log_Event_141/na=logged					
	076	214:05:41:07->214:05:46:57	144610899	ECU	C	7542	Sequentially Close EV1 2 3 4					
Notes:							____ Log_Event_034/na=logged					
	077	->214:05:46:57	144611249	ORB	G		End GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	078	214:05:58:50->214:06:12:25	144611962	ORB	G		Begin GPB over South Atlantic Anomaly					
	079	214:06:00:00->214:06:04:30	144612032	ECU	C	7543	ECU Flow Meter A Monitoring					
Notes:							@*+ Flow_Meter_Heater_Setpoint_A/DE_HSP_FIM____A=0 ____ Log_Event_024/na=logged					
	080	->214:06:02:00	144612152	ORB	G		End TDRSS in contact with GPB					
	081	214:06:02:05->214:06:02:15	144612157	CDH	C	7544	transmit off					
Notes:							____ Log_Event_212/na=logged					
	082	214:06:02:17->214:06:02:27	144612169	CDH	C	7545	Xpndr 2000 m1					
	083	->214:06:12:25	144612777	ORB	G		End GPB over South Atlantic Anomaly					
	084	214:06:16:34->214:06:16:54	144613026	TRE	C	7546	ST Disable Snapshots					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144627937

Sun Aug 1 10:25:05 2004

Page End: 144630626

Sun Aug 1 11:09:54 2004

Page 15

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	148	214:10:25:05->214:10:25:15	144627937	CDH	C	7580	transmit off					
Notes:							____ Log_Event_212/na=logged					
	149	->214:10:39:51	144628823	ORB	G		End GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	150	214:10:41:06->214:10:41:16	144628898	CDH	C	7581	Xpndr 125 m2					
	151	214:10:41:18->214:10:41:28	144628910	CDH	C	7582	transmit A fwd					
Notes:							____ Log_Event_210/na=logged					
	152	214:10:41:33->214:11:06:33	144628925	GND	G		SN NON COHO FWD					
	153	214:10:41:33->214:11:06:33	144628925	ORB	G		Begin TDRSS in contact with GPB					
	154	->214:11:06:33	144630425	ORB	G		End TDRSS in contact with GPB					
	155	214:11:06:38->214:11:06:48	144630430	CDH	C	7583	transmit off					
Notes:							____ Log_Event_212/na=logged					
	156	214:11:06:50->214:11:07:00	144630442	CDH	C	7584	Xpndr 2000 m1					
	157	214:11:09:32->214:11:09:52	144630604	TRE	C	7585	ST Disable Snapshots					
Notes:							____ Log_Event_100/na=logged					
							____ SnapshotMode/none=none					
	158	214:11:09:54->214:11:10:18	144630626	SRE	C	7586	SRE 1KHz SnapshotR Enable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144613048

Sun Aug 1 06:16:56 2004

Page End: 144615363

Sun Aug 1 06:55:31 2004

Page 9

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
Notes:								___ Log_Event_100/na=logged				
								___ SnapshotMode/none=none				
	085	214:06:16:56->214:06:17:20	144613048	SRE	C	7547	SRE 1KHz SnapshotR Enable					
Notes:								___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)				
								@*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1)				
								___ Log_Event_115/na=logged				
	086	214:06:19:55->214:07:24:35	144613227	ORB	G		Begin GPB in Sunlight					
Notes:								@*+ Battery 1 charge status/IW_Bat_1 < 0				
	087	->214:06:21:34	144613326	ORB	G		End Guide Star Valid					
	088	214:06:26:34->214:06:27:24	144613626	SRE	C	7548	guide star invalid with SRE snapshot					
Notes:								___ Log_Event_245/na=logged				
	089	214:06:28:00->214:06:56:20	144613712	SRE	C	7549	SRE Host db readout					
Notes:								___ Log_Event_253/na=logged				
	090	214:06:55:04->214:06:55:14	144615336	CDH	C	7550	Xpndr m2					
Notes:								___ Log_Event_116/na=logged				
	091	214:06:55:16->214:06:55:26	144615348	CDH	C	7551	transmit B aft					
Notes:								___ Log_Event_211/na=logged				
	092	214:06:55:31->214:07:12:31	144615363	GND	G		SN NON COHO AFT					
	093	214:06:55:31->214:07:12:31	144615363	ORB	G		Begin TDRSS in contact with GPB					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651
Sun Aug 1 01:26:59 2004
Report End: 144646398
Sun Aug 1 15:32:46 2004

Page Start: 144624945
Sun Aug 1 09:35:13 2004
Page End: 144627932
Sun Aug 1 10:25:00 2004

Page 14

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	137	214:09:35:13->214:10:39:51	144624945	ORB	G		Begin GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 < 0					
	138	->214:09:36:53	144625045	ORB	G		End Guide Star Valid					
	139	214:09:41:53->214:09:42:43	144625345	SRE	C	7575	guide star invalid with SRE snapshot					
Notes:							____ Log_Event_245/na=logged					
	140	214:09:59:45->214:09:59:55	144626417	CDH	C	7576	transmit B aft					
Notes:							____ Log_Event_211/na=logged					
	141	214:10:00:00->214:10:25:00	144626432	GND	G		SN COHO AFT					
	142	214:10:00:00->214:10:25:00	144626432	ORB	G		Begin TDRSS in contact with GPB					
	143	214:10:13:05->214:10:13:30	144627217	SRE	C	7577	guide star valid no snaps					
Notes:							____ Log_Event_240/na=logged					
	144	214:10:18:05->214:11:14:32	144627517	ORB	G		Begin Guide Star Valid					
	145	214:10:23:05->214:10:23:25	144627817	SRE	C	7578	SRE Snapshot Disable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0) ____ Log_Event_110/na=logged					
	146	214:10:23:27->214:10:23:51	144627839	TRE	C	7579	ST Type3 Snapshot Enable					
Notes:							____ Log_Event_103/na=logged					
	147	->214:10:25:00	144627932	ORB	G		End TDRSS in contact with GPB					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144615499

Sun Aug 1 06:57:47 2004

Page End: 144616932

Sun Aug 1 07:21:40 2004

Page 10

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	094	214:06:57:47->214:06:58:12	144615499	SRE	C	7552	guide star valid no snaps					
Notes:							____ Log_Event_240/na=logged					
	095	214:06:59:39->214:07:00:39	144615611	GND	G		Confirm GN Voice Line Configured					
	096	214:07:02:47->214:07:59:13	144615799	ORB	G		Begin Guide Star Valid					
	097	214:07:07:47->214:07:08:07	144616099	SRE	C	7553	SRE Snapshot Disable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0)					
							____ Log_Event_110/na=logged					
	098	214:07:08:09->214:07:08:33	144616121	TRE	C	7554	ST Type3 Snapshot Enable					
Notes:							____ Log_Event_103/na=logged					
	099	->214:07:12:31	144616383	ORB	G		End TDRSS in contact with GPB					
	100	214:07:12:36->214:07:12:46	144616388	CDH	C	7555	transmit off					
Notes:							____ Log_Event_212/na=logged					
	101	214:07:12:48->214:07:12:58	144616400	CDH	C	7556	Xpndr m1					
Notes:							____ Log_Event_115/na=logged					
	102	214:07:18:56->214:07:19:41	144616768	CDH	C	7557	Xpndr A ON PB Start					
Notes:							____ Log_Event_218/na=logged					
	103	214:07:19:39->214:07:22:10	144616811	ORB	G		Begin GN Fwd in contact with GPB					
	104	214:07:21:40->214:07:22:13	144616932	CDH	C	7558	Xpndr A to B PB Restart					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144621358

Sun Aug 1 08:35:26 2004

Page End: 144624767

Sun Aug 1 09:32:15 2004

Page 13

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
	128	214:08:35:26->214:08:35:51	144621358	SRE	C	7569	guide star valid no snaps					
Notes:							____ Log_Event_240/na=logged					
	129	214:08:40:26->214:09:36:53	144621658	ORB	G		Begin Guide Star Valid					
	130	214:08:45:26->214:08:45:46	144621958	SRE	C	7570	SRE Snapshot Disable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=Off(0)					
							____ Log_Event_110/na=logged					
	131	214:08:45:48->214:08:46:12	144621980	TRE	C	7571	ST Type3 Snapshot Enable					
Notes:							____ Log_Event_103/na=logged					
	132	->214:08:53:00	144622412	ORB	G		End TDRSS in contact with GPB					
	133	214:08:53:05->214:08:53:15	144622417	CDH	C	7572	transmit off					
Notes:							____ Log_Event_212/na=logged					
	134	->214:09:02:13	144622965	ORB	G		End GPB in Sunlight					
Notes:							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	135	214:09:31:53->214:09:32:13	144624745	TRE	C	7573	ST Disable Snapshots					
Notes:							____ Log_Event_100/na=logged					
							____ SnapshotMode/none=none					
	136	214:09:32:15->214:09:32:39	144624767	SRE	C	7574	SRE 1KHz SnapshotR Enable					
Notes:							____ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)					
							@*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1)					
							____ Log_Event_115/na=logged					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144616962

Sun Aug 1 07:22:10 2004

Page End: 144618885

Sun Aug 1 07:54:13 2004

Page 11

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
Notes:												
							____ Log_Event_220/na=logged					
	105	214:07:22:10->214:07:31:22	144616962	ORB	G		Begin GN Aft in contact with GPB					
	106	->214:07:22:10	144616962	ORB	G		End GN Fwd in contact with GPB					
	107	214:07:23:00->214:07:26:26	144617012	FSW	C	7559	MSS SRAM DBE 32k TIm Diag					
	108	->214:07:24:35	144617107	ORB	G		End GPB in Sunlight					
Notes:												
							@*+ Battery 1 charge status/IW_Bat_1 > 0					
	109	214:07:31:20->214:07:32:05	144617512	CDH	C	7560	PB Stop Xpndrs OFF					
Notes:												
							____ Log_Event_222/na=logged					
	110	->214:07:31:22	144617514	ORB	G		End GN Aft in contact with GPB					
	111	214:07:39:15->214:07:42:52	144617987	ORB	G		Begin GPB over South Atlantic Anomaly					
	112	214:07:39:33->214:07:39:43	144618005	CDH	C	7561	Xpndr 125 m2					
	113	214:07:39:45->214:07:39:55	144618017	CDH	C	7562	transmit A fwd					
Notes:												
							____ Log_Event_210/na=logged					
	114	214:07:40:00->214:07:55:00	144618032	GND	G		SN NON COHO FWD					
	115	214:07:40:00->214:07:55:00	144618032	ORB	G		Begin TDRSS in contact with GPB					
	116	->214:07:42:52	144618204	ORB	G		End GPB over South Atlantic Anomaly					
	117	214:07:54:13->214:07:54:33	144618885	TRE	C	7563	ST Disable Snapshots					

GPB Operations Activity Script

Report Date: Sat Jul 31 23:25:47 2004 Prefix: https://gpbops.stanford.edu

Report File: pong182.txt

V=Verification, T=Template Type, M=SPC-M Index, S=Sunlight, A=South Atlantic Anomaly, G=Guide Star Valid, C=Contacts, *=2k SpinUp, +=2k Flight, @=1k Flight

Report Start: 144595651

Sun Aug 1 01:26:59 2004

Report End: 144646398

Sun Aug 1 15:32:46 2004

Page Start: 144618907

Sun Aug 1 07:54:35 2004

Page End: 144621212

Sun Aug 1 08:33:00 2004

Page 12

V	Idx	GMT	VehTime	Sub	T	M	TaskName	S	A	G	C	Summary
Notes:								___ Log_Event_100/na=logged				
								___ SnapshotMode/none=none				
	118	214:07:54:35->214:07:54:59	144618907	SRE	C	7564	SRE 1KHz SnapshotR Enable					
Notes:								___ SQUID_Snapshot_App_Status/PQ_SquidSnapAct=On(1)				
								@*+ SQUID_Snapshot_Mode/SQ_SRESnapMode=Default_1KHz(1)				
								___ Log_Event_115/na=logged				
	119	->214:07:55:00	144618932	ORB	G		End TDRSS in contact with GPB					
	120	214:07:55:05->214:07:55:15	144618937	CDH	C	7565	transmit off					
Notes:								___ Log_Event_212/na=logged				
	121	214:07:55:17->214:07:55:27	144618949	CDH	C	7566	Xpndr 2000 m1					
	122	214:07:57:34->214:09:02:13	144619086	ORB	G		Begin GPB in Sunlight					
Notes:								@*+ Battery 1 charge status/IW_Bat_1 < 0				
	123	->214:07:59:13	144619185	ORB	G		End Guide Star Valid					
	124	214:08:04:13->214:08:05:03	144619485	SRE	C	7567	guide star invalid with SRE snapshot					
Notes:								___ Log_Event_245/na=logged				
	125	214:08:32:45->214:08:32:55	144621197	CDH	C	7568	transmit B aft					
Notes:								___ Log_Event_211/na=logged				
	126	214:08:33:00->214:08:53:00	144621212	GND	G		SN COHO AFT					
	127	214:08:33:00->214:08:53:00	144621212	ORB	G		Begin TDRSS in contact with GPB					