

ETU Axial Boom Deploy with ETU IDPU

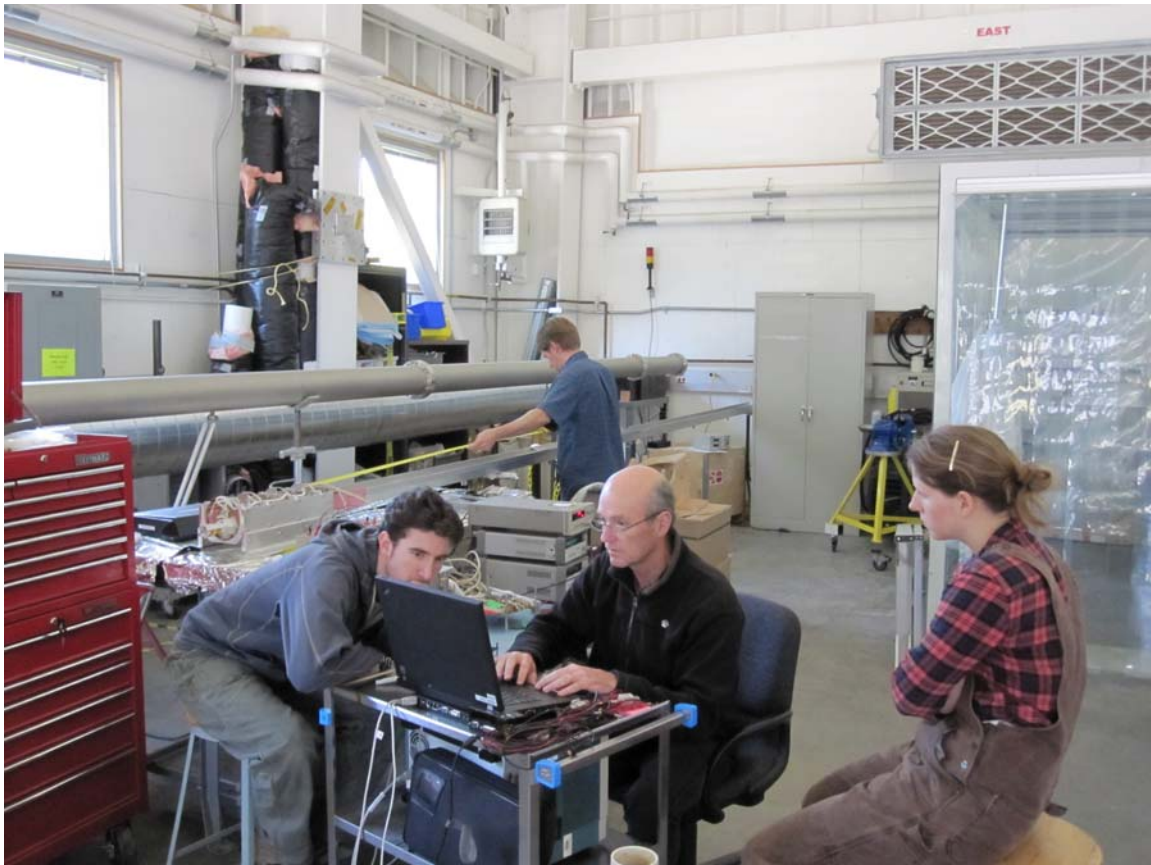
Present:

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Rachel Hochman
Will Rachelson
Peter Harvey
Jeremy McCauley

Purpose of test:

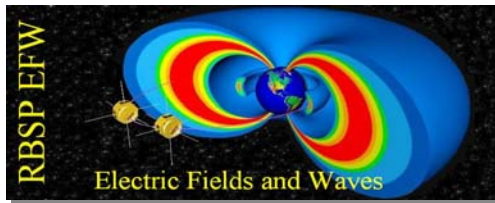
To verify AXB turns count during motor deployment of the stacer boom. Test was run originally in 133 with AXB ETU in Faraday box. After the initial deployment the AXB was moved to the high bay for the rest of the deployment to the full 7m.

Photographic Evidence:



133 Configuration

- IDPU
 - DCB ETU #2
 - BEB ETU #1
 - DFB ETU#1
 - LVPS ETU#2



FSW running version 2.09.

- AXB ETU Installed in Faraday box without whip cage block. Enabled plug substituted with break out box.
- ETU Harnesses
- Deployment power set to 28V.

A scope was set to record sense5 transitions line on PCB connector (J705). FSW needed to be configured to run in fast HSK mode to capture the AXB sense line transitions. The AXB was deployed x clicks. In some of the deployments the FSW recorded the correct number of transitions, but in others some 'clicks' were missed. The deployment power voltage was increased to 33V (maximum expected bus voltage), to simulate the fastest the AXB motor could deploy and more counts were missed when the AXB was deployed.

A modification to the FSW was made to increase the sampling time of the two AXB sense lines. FSW Version 2.10. Using a pulse generator the FSW was characterized to see the minimum pulse width it could accurately read. This was found to be 27ms.

The maximum AXB click count is 6.8Hz but duty cycle is not always 50%. Pulses were seen that are as short as 16ms.

In order to verify deployments longer than x clicks a counter was added to the set up. The AXB was then deployed to the maximum length inside of the faraday box. It was noted that occasionally the boom would deploy 1 more click than set by the FSW. This is likely due to the motor continuing to run slightly longer after the power has been removed. This is not a problem, but indicates the need to record the actual deploy length rather than the commanded value during the flight deploys.

The AXB and IDPU was moved to the high bay to deploy the boom to the full length.

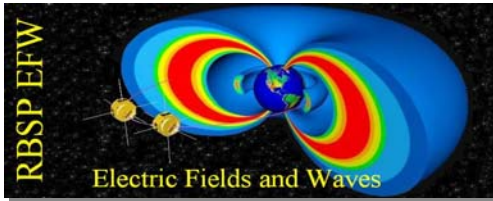
High Bay Configuration

- IDPU
 - DCB ETU #2
 - BEB ETU #1
 - DFB ETU#1
 - LVPS ETU#2
- FSW running version 2.09.
- AXB ETU Installed on deployment track. Enabled plug substituted with break out box.
- ETU Harnesses
- Deployment power set to 33V.
- Counter to record click transitions on the sense5 line.

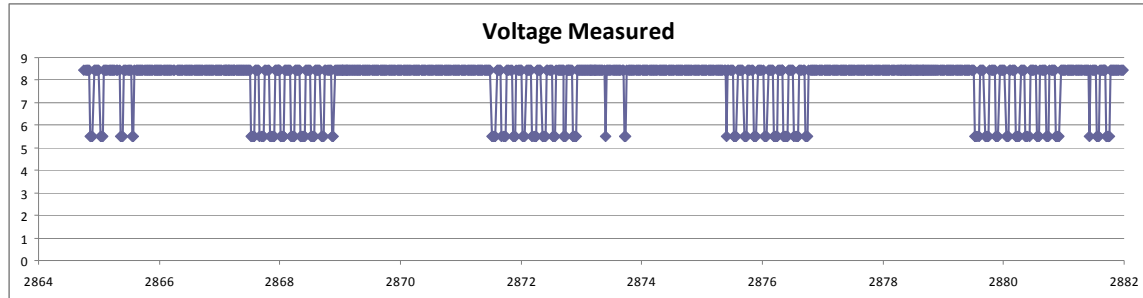
The boom was deployed further first for 50 clicks followed by 100 clicks and then 200 clicks. Some further things cropped up during the testing:

A scripting error disabled the boom axis selected causing the FSW to be unable to turn off the deployment motor. A modification to the FSW will be made to prevent this occurrence. The scripts are also in the debugging stage and once they get used on flight deployments they will be much more rigorously tested.

For the other deployment runs each time the FSW counts and the counter matched. However occasionally the counter was under counting and it was found that the hold off on the counter was set too long.



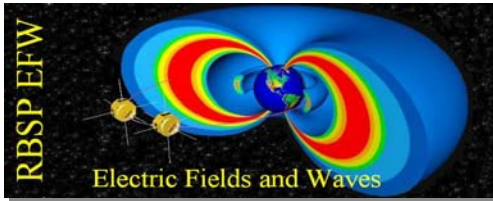
It was noted on the scope that although the FSW and the counter were recording the same number of clicks there were occasions when there was no transition in the sense line as seen on the scope but the motor was still deploying. On further investigation the AXB sense switch did not appear to be pushed down far enough on every click of the deployment wheel. The AXB was tested again and shown to have the same problem. See plot below. Modifications to the GSE controlling the AXB deployment are needed to verify that this does not happen on the flight units. Further analysis might be needed to ensure that the problems seen on the ETU do not occur on the FM's.



AXB sense line from AXB GSE. Note gaps between transitions in deployment blocks.

Conclusions:

1. Test scripts need some work to make them flight ready. Need to test with boom simulators again before flight.
2. Fast HSK needs to be verified to be on for each deploy. Sweeps need to be off for deployments.
3. AXB needs to verify problem with missed clicks does not happen on the FM.
4. A retest will occur as FM AXB's will be deployed by the IDPU.

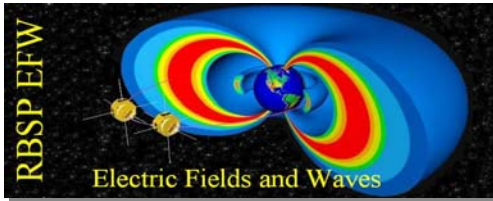


Appendix Test Log from GSE:

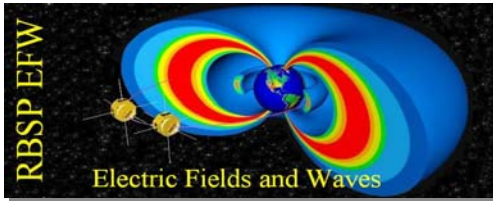
Edited version – removed monitor errors and instrument off errors.

```
Wed Apr 21 10:37:04 2010 apid_267.py: Received new UUTID 2 in 0x267 packet.
Wed Apr 21 10:37:04 2010 apid_267.py: Received new FSW_VERSION: 41 in 0x267 packet.
Wed Apr 21 10:45:31 2010 efw_cmd_log: EFW_ENGIN()
Wed Apr 21 10:45:32 2010 efw_cmd_log: EFW_ENGIN()
Wed Apr 21 10:49:29 2010 efw_cmd_log: EFW_ACTSELECT(ACTUATOR=0xd2)
Wed Apr 21 10:50:20 2010 efw_cmd_log: EFW_ACTTIMEH(MSB=0)
Wed Apr 21 10:54:25 2010 efw_cmd_log: EFW_ARM(OPTION=1)
Wed Apr 21 10:55:44 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=5)
Wed Apr 21 12:12:15 2010 efw_log: 0x0000 1969-12-31 16:00:00 0xc2 0x000001 CMDITFERR CMDITFERR
Wed Apr 21 12:12:31 2010 efw_cmd_log: EFW_ENGIN()
Wed Apr 21 12:12:48 2010 efw_cmd_log: EFW_ARM(OPTION=1)
Wed Apr 21 12:12:58 2010 efw_cmd_log: EFW_ACTSELECT(ACTUATOR=0xd2)
Wed Apr 21 12:13:31 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=5)
Wed Apr 21 12:17:07 2010 efw_cmd_log: EFW_DEP_PAIR(PAIR=5)
Wed Apr 21 12:17:19 2010 efw_cmd_log: EFW_DEP_STOP()
Wed Apr 21 12:18:33 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=5)
Wed Apr 21 12:19:20 2010 efw_cmd_log: EFW_DEP_STOP()
Wed Apr 21 13:32:45 2010 efw_log: 0x0000 1969-12-31 16:00:00 0xc2 0x000001 CMDITFERR CMDITFERR
Wed Apr 21 13:37:11 2010 efw_log: 0x0000 1969-12-31 16:00:00 0xc2 0x000001 CMDITFERR CMDITFERR
Wed Apr 21 13:39:05 2010 efw_cmd_log: EFW_HSKOPTIONS(FAST=1, DISABLE=0, BEBSAMPLE=0)
Wed Apr 21 13:39:50 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Wed Apr 21 13:39:55 2010 efw_cmd_log: EFW_CLEAR()
Wed Apr 21 13:40:34 2010 efw_cmd_log: EFW_ENGIN()
Wed Apr 21 13:41:12 2010 efw_cmd_log: EFW_ARM(OPTION=1)
Wed Apr 21 13:41:28 2010 efw: idpu_load(addr=0x0000DDFF, bytes=0x(00))
Wed Apr 21 13:43:03 2010 efw_cmd_log: EFW_DEP_PAIR(PAIR=5)
Wed Apr 21 13:43:48 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=5)
Wed Apr 21 14:15:29 2010 efw_cmd_log: EFW_DUMPADRX(0)
Wed Apr 21 14:15:30 2010 efw_cmd_log: EFW_DUMPADRE(0)
Wed Apr 21 14:15:30 2010 efw_cmd_log: EFW_DUMPADRH(37)
Wed Apr 21 14:15:30 2010 efw_cmd_log: EFW_DUMPADRL(66)
Wed Apr 21 14:15:30 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Wed Apr 21 14:15:54 2010 efw_cmd_log: EFW_DUMPADRX(0)
Wed Apr 21 14:15:54 2010 efw_cmd_log: EFW_DUMPADRE(0)
Wed Apr 21 14:15:54 2010 efw_cmd_log: EFW_DUMPADRH(149)
Wed Apr 21 14:15:54 2010 efw_cmd_log: EFW_DUMPADRL(56)
Wed Apr 21 14:15:54 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Wed Apr 21 14:16:28 2010 efw_cmd_log: EFW_ADRH(149)
Wed Apr 21 14:16:28 2010 efw_cmd_log: EFW_ADRL(56)
Wed Apr 21 14:16:28 2010 efw_cmd_log: EFW_LOAD(1)
Wed Apr 21 14:17:26 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=5)
Wed Apr 21 14:25:08 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=1)
Wed Apr 21 14:25:50 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=2)
Wed Apr 21 14:29:15 2010 efw_cmd_log: EFW_DUMPADRX(0)
Wed Apr 21 14:29:15 2010 efw_cmd_log: EFW_DUMPADRE(0)
Wed Apr 21 14:29:15 2010 efw_cmd_log: EFW_DUMPADRH(146)
Wed Apr 21 14:29:15 2010 efw_cmd_log: EFW_DUMPADRL(58)
Wed Apr 21 14:29:15 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Wed Apr 21 14:29:37 2010 efw_cmd_log: EFW_DISARM(4)
Wed Apr 21 14:31:09 2010 efw_cmd_log: EFW_HSKOPTIONS(FAST=1, DISABLE=0, BEBSAMPLE=0)
Wed Apr 21 14:33:19 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=3)
Wed Apr 21 14:36:32 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=4)
Wed Apr 21 14:53:48 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=4)
Wed Apr 21 14:56:48 2010 efw_cmd_log: EFW_DEP_PLUS(CLICKS=4)

Thu Apr 22 09:18:52 2010 apid_267.py: Received new UUTID 2 in 0x267 packet.
Thu Apr 22 09:18:52 2010 apid_267.py: Received new FSW_VERSION: 41 in 0x267 packet.
Thu Apr 22 09:18:52 2010 efw_log: 0x4bd076ed 2010-04-22 09:18:53 0xc2 0xe0005b
Thu Apr 22 09:38:36 2010 efw_log: 0x0000 1969-12-31 16:00:00 0xc2 0x000001 CMDITFERR CMDITFERR
Thu Apr 22 09:38:42 2010 apid_267.py: Received new FSW_VERSION: 42 in 0x267 packet.
Thu Apr 22 09:39:20 2010 efw: idpu_load(addr=0x0000DDFF, bytes=0x(00))
Thu Apr 22 09:39:21 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 09:41:30 2010 efw_cmd_log: EFW_DEP_OVER(MASK=0x11)
Thu Apr 22 09:43:15 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 09:44:13 2010 efw_cmd_log: EFW_DEP_PAIR(PAIR=5)
Thu Apr 22 09:44:18 2010 efw_log: 0x4bd07cde 2010-04-22 09:44:14 0x31 0xfddd01 DEPENAERR DEPENAERR
Thu Apr 22 09:44:29 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 09:44:46 2010 efw_cmd_log: EFW_ARM(OPTION=1)
Thu Apr 22 09:45:10 2010 efw_cmd_log: EFW_DEP_PAIR(PAIR=5)
Thu Apr 22 09:45:42 2010 efw_cmd_log: EFW_DEP_OVER(MASK=0x11)
Thu Apr 22 14:09:00 2010 efw: Opening explorer on folder: C:\Documents and Settings\rbps\My Documents\RBSP-
GSE\software\GSEOS\Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU
Thu Apr 22 14:11:22 2010 rsync: Rsync error: ['ssh: Could not resolve hostname efw.ssl.berkeley.edu: no address
associated with name'n', 'rsync: connection unexpectedly closed (0 bytes received so far) [sender]n', 'rsync error:
unexplained error (code 255) at /home/lapo/packaging/rsync-3.0.4-1/src/rsync-3.0.4/io.c(632) [sender=3.0.4]n']
Thu Apr 22 14:13:18 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:13:18 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:13:18 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:13:18 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 1 Clicks
Thu Apr 22 14:13:18 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:13:18 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_ARM(1)
```



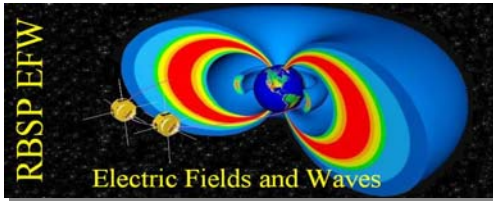
```
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:13:18 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY: Exception in script IAXB_DEPLOY.py: Sequencer '_' Wait() has timed out
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY: Traceback (most recent call last):
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY:   File "C:\Documents and Settings\rbsp\My Documents\RBSP-
GSE\software\GSEOS\Instruments\EFW\efw_scripting.py", line 358, in run_fn
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY:     retval = script_module.main(*args, **kwargs)
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY:   File "../GSEOS_scripts/General\IAXB_DEPLOY.py", line 43, in main
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY:     wait(APID_267, lambda: APID_267.ERRCODE==0, flTimeout=10)
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY:   File "G:\Gseos6.0\Build\Gseos\PyModules\GSequencer\GseosSequencer.py", line
419, in Wait
Thu Apr 22 14:13:28 2010 IAXB_DEPLOY: TSeqTimeoutError: Sequencer '_' Wait() has timed out
Thu Apr 22 14:13:28 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:13:28 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments\EFW\bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 1 Clicks
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:14:19 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:14:19 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:14:24 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:14:25 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:14:27 2010 IAXB_DEPLOY: 5. Deploying Boom
Thu Apr 22 14:14:51 2010 efw_cmd_log: EFW_DEP_PLUS(1)
Thu Apr 22 14:14:51 2010 IAXB_DEPLOY: 6. Monitoring
Thu Apr 22 14:14:55 2010 IAXB_DEPLOY: 7. Await Completion
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY: Exception in script IAXB_DEPLOY.py: Sequencer '_' Wait() has timed out
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY: Traceback (most recent call last):
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY:   File "C:\Documents and Settings\rbsp\My Documents\RBSP-
GSE\software\GSEOS\Instruments\EFW\efw_scripting.py", line 358, in run_fn
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY:     retval = script_module.main(*args, **kwargs)
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY:   File "../GSEOS_scripts/General\IAXB_DEPLOY.py", line 88, in main
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY:     wait(APID_267, lambda: APID_267.DEPSTAT==0x00, flTimeout=60) #Stopped
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY:   File "G:\Gseos6.0\Build\Gseos\PyModules\GSequencer\GseosSequencer.py", line
419, in Wait
Thu Apr 22 14:15:55 2010 IAXB_DEPLOY: TSeqTimeoutError: Sequencer '_' Wait() has timed out
Thu Apr 22 14:15:56 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:15:56 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments\EFW\bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:16:22 2010 rsync: Rsync error: ['ssh: Could not resolve hostname efw.ssl.berkeley.edu: no address
associated with name\n', 'rsync: connection unexpectedly closed (0 bytes received so far) [sender]\n', 'rsync error:
unexplained error (code 255) at /home/lapo/packaging/rsync-3.0.4-1/src/rsync-3.0.4/io.c(632) [sender=3.0.4]\n']
Thu Apr 22 14:18:47 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:18:51 2010 efw_log: 0x4bd0bd38 2010-04-22 14:18:48 0x31 0xfddd01 DEPENAERR DEPENAERR
Thu Apr 22 14:20:58 2010 rsync: cygrun: c:/cygwin/bin/bash -c "/usr/bin/pwd"
Thu Apr 22 14:20:58 2010 rsync: Starting sync thread
Thu Apr 22 14:21:00 2010 rsync: cygrun: c:/cygwin/bin/bash -c "/usr/bin/rsync -a --perms --
chmod=Dg+rwx,Do+rx,Fg+rw,Fo+x,F-x --rsh=/usr/bin/ssh /cygdrive/c/Documents\ and\ Settings\rbsp\My\ Documents\RBSP-
GSE/software\GSEOS\Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU
rbspgee@efw.ssl.berkeley.edu:rbspdata/bench-tests"
Thu Apr 22 14:21:00 2010 rsync: Rsync done: []
Thu Apr 22 14:21:21 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:21:21 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:21:21 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:21:21 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 2 Clicks
Thu Apr 22 14:21:21 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:21:21 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:21:22 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:21:26 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:21:26 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:21:31 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:21:32 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:21:34 2010 IAXB_DEPLOY: 5. Deploying Boom
```

RBSF EFW_TR_023

ETU AXB Boom Deploy

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Thu Apr 22 14:21:55 2010 efw_cmd_log: EFW_DEP_PLUS(2)
Thu Apr 22 14:21:55 2010 IAXB_DEPLOY: 6. Monitoring
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY: Exception in script IAXB_DEPLOY.py: Sequencer '_' Wait() has timed out
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY: Traceback (most recent call last):
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY: File "C:\Documents and Settings\rbsp\My Documents\RBSF-
GSE\software\GSEOS\Instruments\EFW\efw_scripting.py", line 358, in run_fn
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY:     retval = script_module.main(*args, **kwargs)
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY: File "...\GSEOS_scripts\General\IAXB_DEPLOY.py", line 74, in main
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY:     wait(APID_267, lambda: APID_267.DEPSTAT!=00, flTimeout=12)
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY: File "G:\Gseos6.0\Build\Gseos\PyModules\GSequencer\GseosSequencer.py", line
419, in Wait
Thu Apr 22 14:22:07 2010 IAXB_DEPLOY: TSeqTimeoutError: Sequencer '_' Wait() has timed out
Thu Apr 22 14:22:07 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:22:07 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments\EFW\bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:23:12 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:23:16 2010 efw_log: 0x4bd0be42 2010-04-22 14:23:14 0x31 0xfddd01 DEPENAERR DEPENAERR
Thu Apr 22 14:23:27 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:23:27 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:23:27 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:23:27 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 10 Clicks
Thu Apr 22 14:23:27 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:23:27 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:23:27 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:23:31 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:23:31 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:23:36 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:23:37 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY: Exception in script IAXB_DEPLOY.py: Sequencer '_' Wait() has timed out
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY: Traceback (most recent call last):
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY: File "C:\Documents and Settings\rbsp\My Documents\RBSF-
GSE\software\GSEOS\Instruments\EFW\efw_scripting.py", line 358, in run_fn
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY:     retval = script_module.main(*args, **kwargs)
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY: File "...\GSEOS_scripts\General\IAXB_DEPLOY.py", line 58, in main
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY:     wait(APID_267, lambda: APID_267.DLENA==0, flTimeout=12)
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY: File "G:\Gseos6.0\Build\Gseos\PyModules\GSequencer\GseosSequencer.py", line
419, in Wait
Thu Apr 22 14:23:49 2010 IAXB_DEPLOY: TSeqTimeoutError: Sequencer '_' Wait() has timed out
Thu Apr 22 14:23:50 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:23:50 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments\EFW\bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:24:11 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:24:16 2010 efw_log: 0x4bd0be7e 2010-04-22 14:24:14 0x31 0xfddd01 DEPENAERR DEPENAERR
Thu Apr 22 14:25:10 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:25:10 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:25:10 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:25:10 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 10 Clicks
Thu Apr 22 14:25:10 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:25:10 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:25:10 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:25:14 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:25:14 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:25:19 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:25:20 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:25:20 2010 IAXB_DEPLOY: 5. Deploying Boom
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_DEP_PLUS(10)
Thu Apr 22 14:25:27 2010 IAXB_DEPLOY: 6. Monitoring
Thu Apr 22 14:25:27 2010 IAXB_DEPLOY: 6.1 DEPLOY STATUS Incorrect
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_DEP_STOP()
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_DEP_PAIR(0)
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_HSKOPTIONS(0, 0, 0)
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_ARM(4)
Thu Apr 22 14:25:27 2010 efw_cmd_log: EFW_NORMAL()
Thu Apr 22 14:25:27 2010 IAXB_DEPLOY: Script IAXB_DEPLOY.py completed
Thu Apr 22 14:25:27 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:25:27 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments\EFW\bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:25:45 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:29:50 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:30:08 2010 efw_cmd_log: EFW_ENGIN()
```

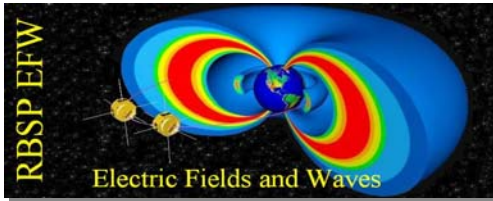


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Thu Apr 22 14:30:20 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:32:00 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:39:54 2010 efw_cmd_log: EFW_DEP_PAIR(0)
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 2 Clicks
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:42:15 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:42:15 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:42:20 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:42:21 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:42:21 2010 IAXB_DEPLOY: 5. Deploying Boom
Thu Apr 22 14:42:42 2010 efw_cmd_log: EFW_DEP_PLUS(2)
Thu Apr 22 14:42:42 2010 IAXB_DEPLOY: 6. Monitoring
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY: Exception in script IAXB_DEPLOY.py: Sequencer '_' Wait() has timed out
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY: Traceback (most recent call last):
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY:   File "C:\Documents and Settings\rbsp\My Documents\RBSP-
GSEOSoftware\GSEOS\Instruments\EFW\efw_scripting.py", line 358, in run_fn
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY:     retval = script_module.main(*args, **kwargs)
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY:   File "../GSEOS_scripts/General\IAXB_DEPLOY.py", line 75, in main
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY:     wait(APID_267, lambda: APID_267.DEPSTAT!=00, flTimeout=12)
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY:   File "G:\Gseos6.0\Build\Gseos\PyModules\GSequencer\GseosSequencer.py", line
419, in Wait
Thu Apr 22 14:42:54 2010 IAXB_DEPLOY: TSeqTimeoutError: Sequencer '_' Wait() has timed out
Thu Apr 22 14:42:55 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:42:55 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments\EFW\bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:45:09 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:45:14 2010 efw: idpu_load(addr=0x000DDFF, bytes=0x(00))
Thu Apr 22 14:45:14 2010 efw_log: 0x4bd0c368 2010-04-22 14:45:12 0x31 0xfdd01 DEPENAERR DEPENAERR
Thu Apr 22 14:45:16 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 20 Clicks
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:47:43 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:47:43 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:47:48 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:47:49 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:47:49 2010 IAXB_DEPLOY: 5. Deploying Boom
Thu Apr 22 14:47:57 2010 efw_cmd_log: EFW_DEP_PLUS(20)
Thu Apr 22 14:47:57 2010 IAXB_DEPLOY: 6. Monitoring longer deploys
Thu Apr 22 14:47:57 2010 IAXB_DEPLOY: 7. Await Completion
Thu Apr 22 14:47:57 2010 IAXB_DEPLOY: 8. Post Deploy Checks
Thu Apr 22 14:47:57 2010 IAXB_DEPLOY: 8.1 DEPLOY LENGTH A Incorrect
Thu Apr 22 14:47:57 2010 efw_cmd_log: EFW_DEP_STOP()
Thu Apr 22 14:47:59 2010 efw_cmd_log: EFW_DEP_PAIR(0)
Thu Apr 22 14:47:59 2010 efw_cmd_log: EFW_HSKOPTIONS(0, 0, 0)
Thu Apr 22 14:47:59 2010 efw_cmd_log: EFW_ARM(4)
Thu Apr 22 14:47:59 2010 efw_cmd_log: EFW_NORMAL()
Thu Apr 22 14:47:59 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments\EFW\bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:47:59 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:49:10 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: -----
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: Starting script IAXB_DEPLOY.py
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: IAXB_DEPLOY - Deploy Boom5 20 Clicks
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: =====
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_TMPKTRATE(4, 1)
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: 1. Switch to Eng Mode, ARM deploy
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)

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Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_DEP_OVER(17)
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_TMDUMPCTR(255)
Thu Apr 22 14:49:33 2010 IAXB_DEPLOY: 2. Selecting Boom Pair
Thu Apr 22 14:49:33 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:49:38 2010 IAXB_DEPLOY: 3. Checking Door Status
Thu Apr 22 14:49:39 2010 IAXB_DEPLOY: 4. Verifying start counts
Thu Apr 22 14:49:39 2010 IAXB_DEPLOY: 5. Deploying Boom
Thu Apr 22 14:49:51 2010 efw_cmd_log: EFW_DEP_PLUS(20)
Thu Apr 22 14:49:51 2010 IAXB_DEPLOY: 6. Monitoring longer deploys
Thu Apr 22 14:49:56 2010 IAXB_DEPLOY: 7. Await Completion
Thu Apr 22 14:49:59 2010 IAXB_DEPLOY: 8. Post Deploy Checks
Thu Apr 22 14:49:59 2010 IAXB_DEPLOY: 9. Verified 20 Clicks
Thu Apr 22 14:49:59 2010 efw_cmd_log: EFW_DEP_STOP()
Thu Apr 22 14:49:59 2010 efw_cmd_log: EFW_HSKOPTIONS(0, 0, 0)
Thu Apr 22 14:49:59 2010 efw_cmd_log: EFW_DISARM(1)
Thu Apr 22 14:49:59 2010 efw_cmd_log: EFW_ARM(4)
Thu Apr 22 14:49:59 2010 efw_cmd_log: EFW_NORMAL()
Thu Apr 22 14:49:59 2010 IAXB_DEPLOY: IAXB_DEPLOY Completed
Thu Apr 22 14:49:59 2010 IAXB_DEPLOY: =====END=====
Thu Apr 22 14:49:59 2010 IAXB_DEPLOY: Script IAXB_DEPLOY.py completed
Thu Apr 22 14:49:59 2010 efw_scripting: Recorded profile information for script IAXB_DEPLOY to file
Instruments/EFW/bench-tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_profile.txt
Thu Apr 22 14:49:59 2010 efw_scripting: Recorded trace for script IAXB_DEPLOY to file Instruments/EFW/bench-
tests\20100422_140642_UUT99_AXBDeployHiBayETU\IAXB_DEPLOY_trace.txt
Thu Apr 22 14:50:04 2010 efw_log: 0x4bd0c48a 2010-04-22 14:50:02 0x31 0xfddd01 DEPENAERR DEPENAERR
Thu Apr 22 14:52:49 2010 efw_cmd_log: EFW_ENGIN()
Thu Apr 22 14:52:51 2010 efw_cmd_log: EFW_ARM(1)
Thu Apr 22 14:52:56 2010 efw_cmd_log: EFW_DEP_PAIR(5)
Thu Apr 22 14:53:32 2010 efw_cmd_log: EFW_DEP_PLUS(20)
Thu Apr 22 14:54:21 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:55:19 2010 efw_cmd_log: EFW_DEP_STOP()
Thu Apr 22 14:56:54 2010 efw_cmd_log: EFW_DISARM(4)
Thu Apr 22 14:56:59 2010 efw_cmd_log: EFW_HSKOPTIONS(1, 0, 0)
Thu Apr 22 14:57:17 2010 efw_cmd_log: EFW_DEP_PLUS(20)
Thu Apr 22 14:58:05 2010 efw_cmd_log: EFW_DEP_PLUS(100)
Thu Apr 22 14:59:18 2010 efw_cmd_log: EFW_DEP_PLUS(100)
Thu Apr 22 15:01:16 2010 efw_cmd_log: EFW_DEP_PLUS(200)
Thu Apr 22 15:04:20 2010 efw_cmd_log: EFW_DUMPTABL(3, 0)
Thu Apr 22 15:06:35 2010 efw_cmd_log: EFW_CLEAR()
Thu Apr 22 15:09:39 2010 efw: CMD error:
Thu Apr 22 15:09:49 2010 efw_cmd_log: EFW_DEP_OVER(51)
Thu Apr 22 15:12:57 2010 efw_cmd_log: EFW_DEP_PLUS(160)
Thu Apr 22 15:17:05 2010 efw_cmd_log: EFW_DEP_PLUS(5)
Thu Apr 22 15:19:00 2010 efw_cmd_log: EFW_DEP_PLUS(50)
Thu Apr 22 15:20:22 2010 efw_cmd_log: EFW_DEP_PLUS(100)
Thu Apr 22 15:21:07 2010 efw_cmd_log: EFW_DEP_PLUS(20)
```