

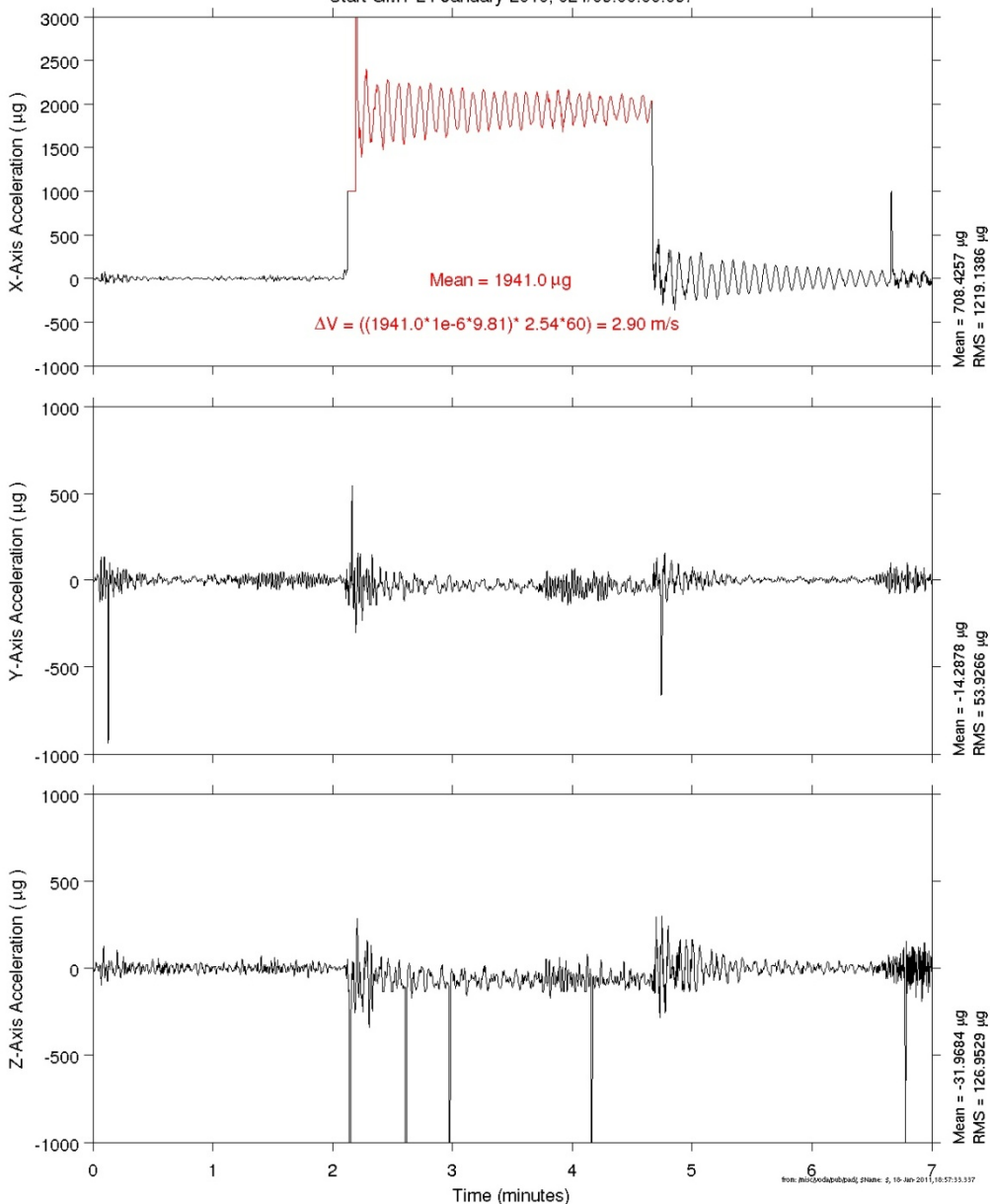
Service Module Reboost

mams, ossraw at LAB1O2, ER1, Lockers 3,4[135.28 -10.68 132.12]
10.0000 sa/sec (1.00 Hz)

Increment: 19, Flight: 15A
SSAnalysis[0.0 0.0 0.0]

SM Reboost - Nominal

Start GMT 24-January-2010, 024/09:00:00.097



Description

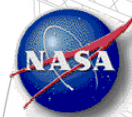
Sensor	MAMS,ossraw 10 sa/sec (1 Hz)
Location	LAB1O2, ER1, Lockers 3,4
Orientation	Space Station Analysis (SSA)
Inc/Flight	Increment: 21, Flight: ULF3
Plot Type	Time Series

NOTES:

- Periodic reboosts of the ISS are necessary due to orbital decay or for debris avoidance maneuvers.
- Method for conducting a reboost is using the aft facing attitude control thrusters of a docked cargo vehicle or with the Zvesda Service module.
- The Service Module has thirty-two 29.3-pounds force attitude control engines.
- OSS Data captured during the SM reboost on GMT 024/24-Jan-2010 is shown on the left.



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Regime:	Quasi-steady
Category:	Vehicle
Source:	Reboost

Service Module Reboost

Reboost Information				Calculations from MAMS OSS Data		
Time of Ignition	Remarks	Duration (s)	ΔV (m/s)	Duration (s)	ΔV (m/s)	X-Axis Mean(μg)
25-Apr-2007, 115/10:23	Nominal burn	33	1.73	N/A	N/A	N/A
28-Apr-2007, 118/10:40	Nominal burn	81	2.42	77	2.33	3070
24-Sep-2007, 267/19:34	6% overburn	107	2.9	112	2.91	2789
12-Jan-2008, 012/00:42	5% overburn	138	3.0	117	2.99	2596
28-Feb-2008, 059/05:16		124	2.8	121	2.99	2516
14-Jan-2009, 014/18:06	Nominal velocity burn, excessive vibrations*	142	3.05	143	3.08	2202
22-Jan-2010, 022/09:06	Nominal burn	54	1.00	53	1.00	1913
24-Jan-2010, 024/09:01	3.5% overburn	154	2.85	152	2.90	1940
6-Jun-2010, 156/03:20	3% overburn	247	4.50	247	4.44	1833
9-Dec-2011, 343/19:50		82	1.3	80	1.33	1708
28-Jan-2012, 28/23:50	Debris Avoidance Maneuver	64	1.0	61	1.06	1703

* See SM Reboost – Excessive Vibration handbook page for details on events of GMT 014/14-Jan-2009.

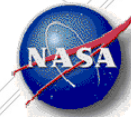
Description	
Sensor	MAMS,ossbtmf 0.0625 sa/sec (1 Hz)
Location	LAB1O2, ER1, Lockers 3,4
Orientation	Space Station Analysis (SSA)
Inc/Flight	Increments: 3-28 Flights: Various
Plot Type	Time Series



Service Module Thrusters. (from ISS Digital Imagery Management System)



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PIMS ISS Acceleration Handbook
Date last modified 1/30/12

Regime:	Quasi-steady
Category:	Vehicle
Source:	Progress Thrusters