

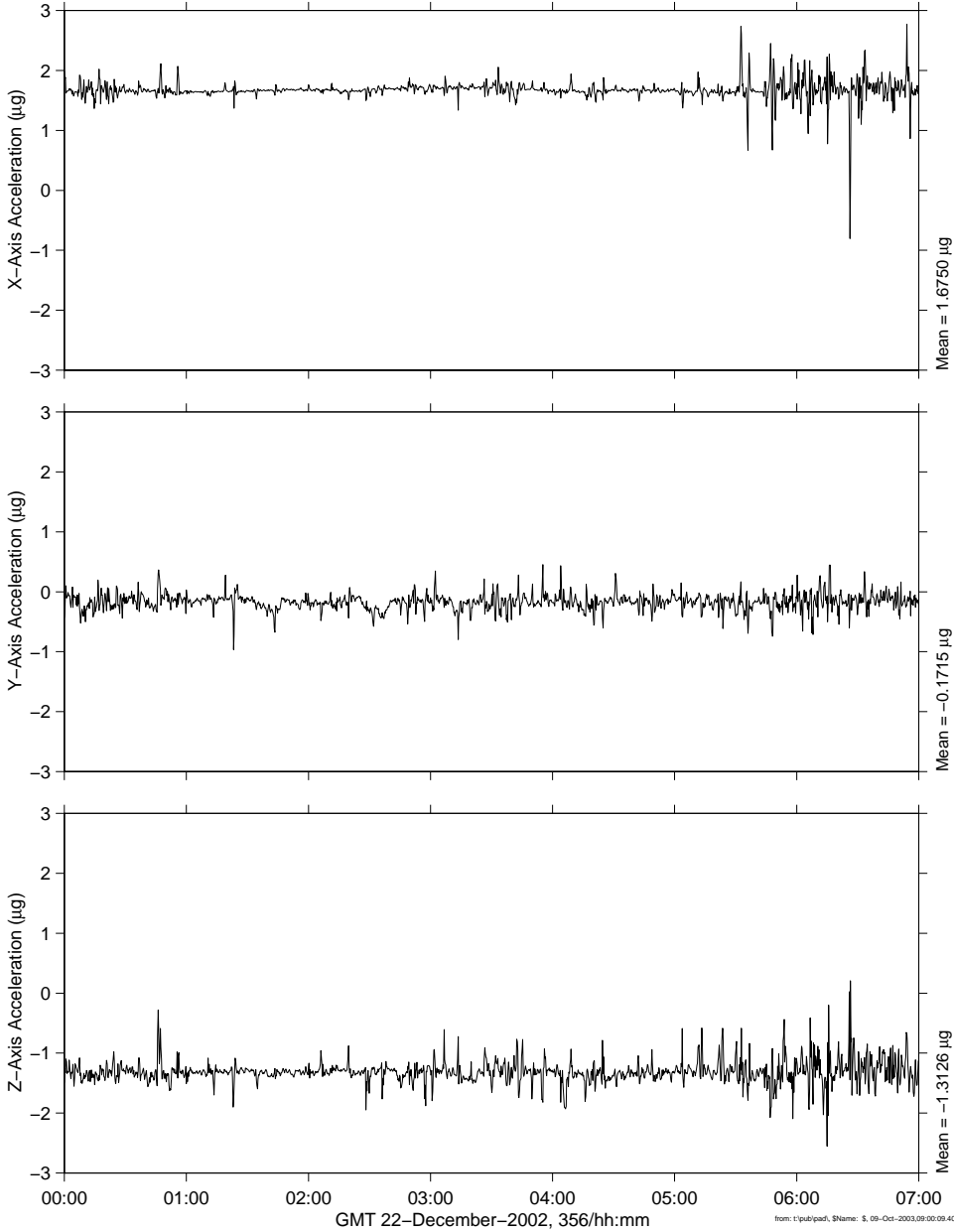
YVV ZLV TEA Attitude

mams, ossbtmf at LAB1O2, ER1, Lockers 3,4[135.28 -10.68 132.12]
0.0625 sa/sec (0.01 Hz)

Increment: 6, Flight: 11A
SSAnalysis[0.0 0.0 0.0]

+ZLV +YVV Torque Equilibrium Attitude

Start GMT 22-December-2002, 356/00:00:15.296



Description

Sensor	MAMS,ossbtmf 0.0625 sa/sec (0.01 Hz)
Location	LAB1O2, ER1, Lockers 3,4
Orientation	Space Station Analysis (SSA)
Inc/Flight	Increment: 6, Flight: 11A
Plot Type	Time Series

NOTES:

- YVV ZLV is a Torque equilibrium attitude (airplane-like) in which the Y-axis is maintained in the velocity vector and the Z-axis is pointing nadir. The ISS will fly with either the +Y-axis or -Y-axis in the forward direction. In this attitude the X-axis is perpendicular to orbital plane.
- During high solar beta angles (>60 degrees) the ISS is flown in YVV attitude to avoid overheating of the Progress batteries. For this reason, YVV has been referred to as "barbecue" mode.
- The plot shown is of data taken during a crew sleep period. The mean values per axis are tabulated below.

Axis	Mean (ug)	RMS (ug)
X	1.68	1.78
Y	-0.17	0.50
Z	-1.31	0.61



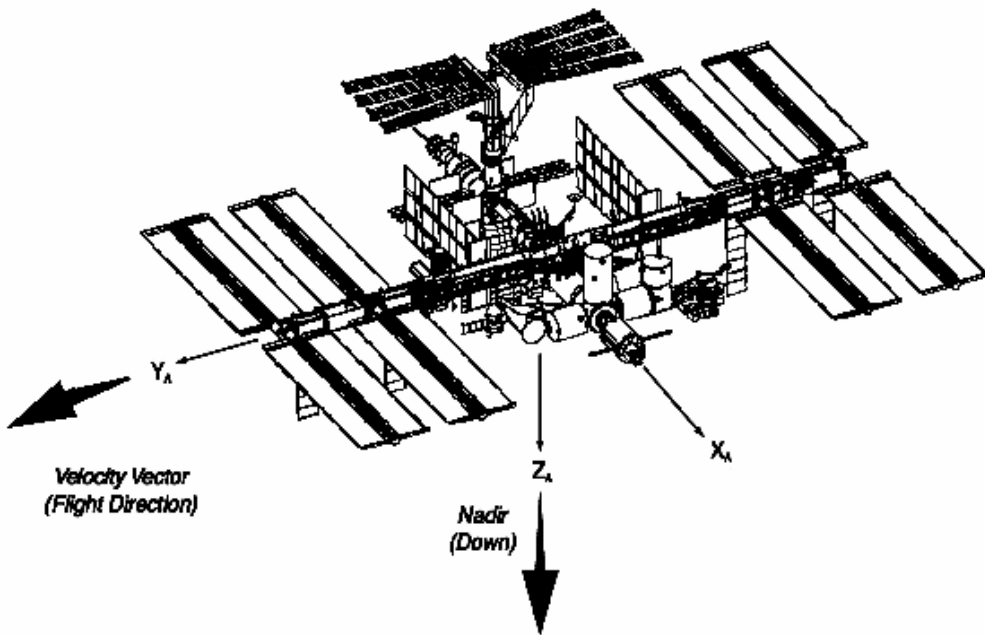
Microgravity Science Division



Glenn Research Center

Regime:	Quasi-steady
Category:	Vehicle
Source:	Attitude, YVV

YVV ZLV TEA Attitude

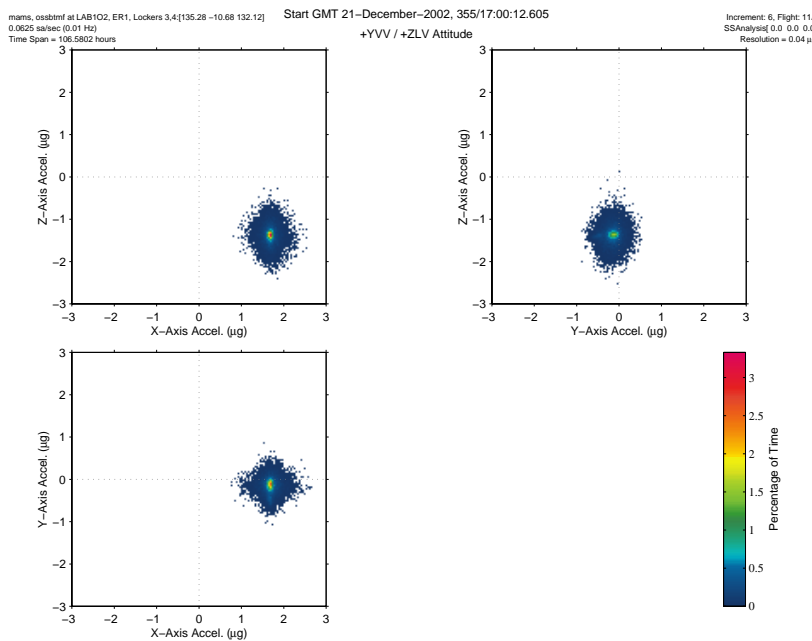


Description	
Sensor	MAMS, ossbtmf 0.0625 sa/sec (0.01 Hz)
Location	LAB102, ER1, Lockers 3,4
Orientation	Space Station Analysis (SSA)
Inc/Flight	Increment: 6, Flight: 11A
Plot Type	Quasi-steady Three Dimensional Histogram

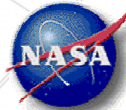
NOTES:

- YVV attitude has been flown with either +Y or -Y axis into the velocity vector.
- Actual orientation dependent on ISS configuration. For time span of plot during Increment 6, attitude was nominally [yaw pitch roll] = [271.1 351.6 1.8]
- For the time period shown, the centroid is calculated as an estimate of the means for each axis. The results are tabulated below.

Axis	Centroid (μg)
X	1.70
Y	-0.15
Z	-1.34
Magnitude	2.17



Microgravity Science Division



Glenn Research Center

Regime:	Quasi-steady
Category:	Vehicle
Source:	Attitude, TEA