


| Description |  |
| ---: | :--- |
| Sensor | MAMS ossbtmf <br> 0.0625 sa/sec, 0.01 Hz |
| Location | LAB1O2, ER1, Lockers 3,4 |
| Plot Type | XYZ Accel. vs. Time |

## Notes:

- This 3-panel plot shows MAMS measurements for all of January 2016.
- These data were mathematically mapped to the following location in Space Station Analysis Coordinates:

$$
\begin{array}{ll}
0 & X A=+69.31^{\prime \prime} \\
0 & Y A=+40.39^{\prime \prime} \\
0 & Z A=+196.41^{\prime \prime}
\end{array}
$$

- The coordinates shown above are that of the SAMS TSH sensor in LAB1S4 (FIR) location in the US Lab Module.
- Note that what appears to be a positive acceleration spike is shown as a 17-minute reboost on GMT 11-Jan-2016 (see the next page for detail).
- The nominal quasi-steady vector is given by the stats along the right margin:

$$
\begin{array}{ll}
\mathrm{o} & X A=0.02 \mathrm{ug} \\
0 & Y A=0.18 \mathrm{ug} \\
0 & Z A=-0.76 \mathrm{ug}
\end{array}
$$

| Regime: | Quasi-Steady |
| ---: | :--- |
| Category: | Vehicle |
| Source: | FIR Quasi-Steady Vector 18-Mar- <br> 2016 |

$$
\Delta V=\left(\left(164.6^{*} 1 \mathrm{e}-6^{*} 9.81\right)^{*} 17.07^{*} 60\right)=1.65 \mathrm{~m} / \mathrm{s}
$$



| Description |  |
| ---: | :--- |
| Sensor | MAMS ossbtmf <br> $0.0625 \mathrm{sa} / \mathrm{sec}, 0.01 \mathrm{~Hz}$ |
| Location | LAB1O2, ER1, Lockers 3,4 |
| Plot Type | XYZ Accel. vs. Time |

## Notes:

- This 3-panel plot of MAMS OSS data shows the Progress 61P reboost that took place on GMT 11-Jan-2016.
- These data were not mapped to the FIR sensor location like on the previous page.
- These data are intended to show that when a Progress vehicle fires its thrusters in the aftward direction, it results in a temporary acceleration opposite the direction the thrusters are pointed. Newton's 3rd law.
- This should give you polarity reference of the data on both this page and on the previous page. When the vehicle and things rigidly attached to it accelerate in the forward direction, and MAMS measures a positive XA-axis acceleration as seen here.

| Regime: | Quasi-Steady |
| ---: | :--- |
| Category: | Vehicle |
| Source: | FIR Quasi-Steady Vector 18-Mar- <br> 2016 |

