

B&K Test Results for BBSS

(with and without HRTS)

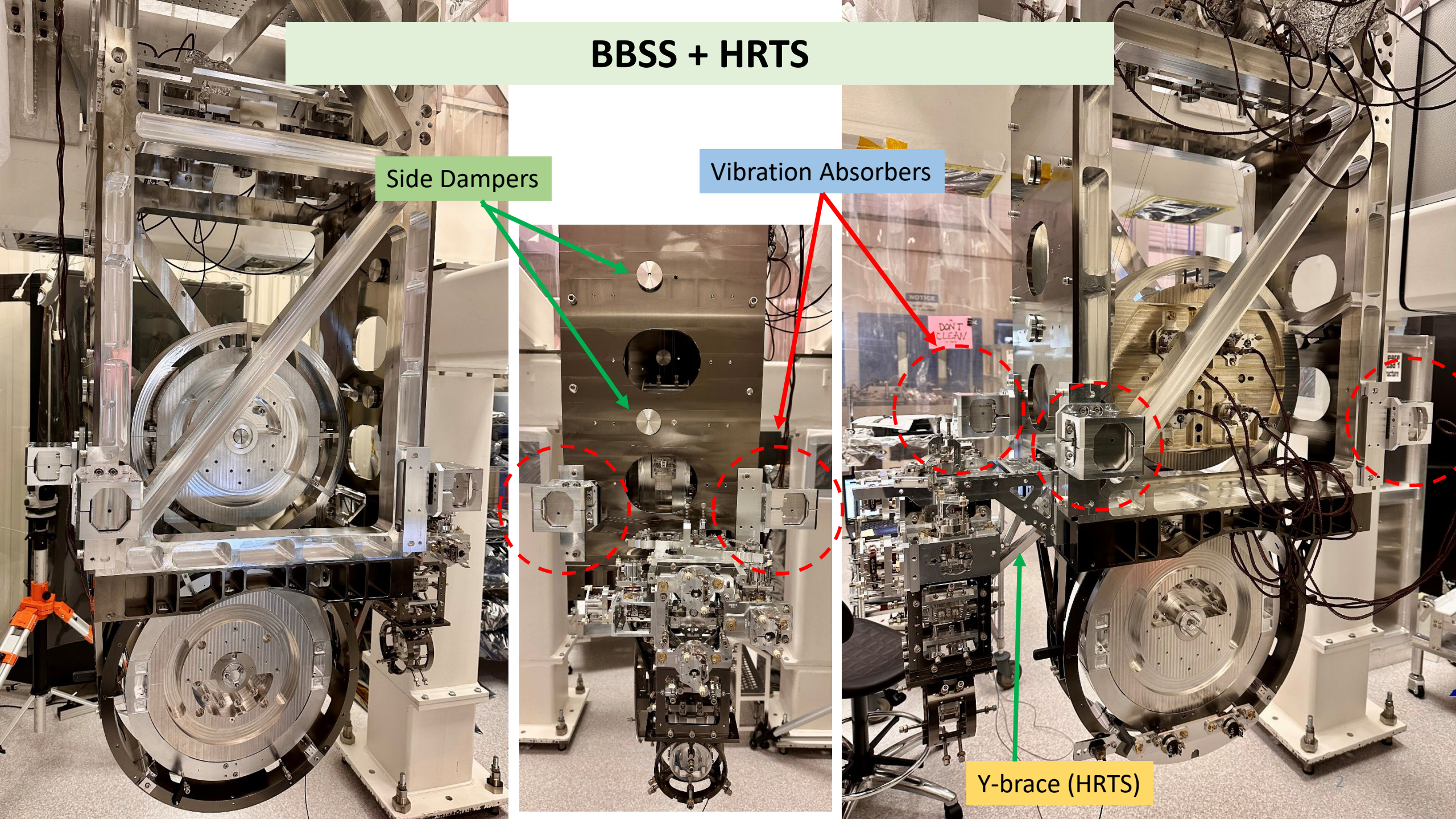
Rahul Kumar
LHO, 21 July 2025

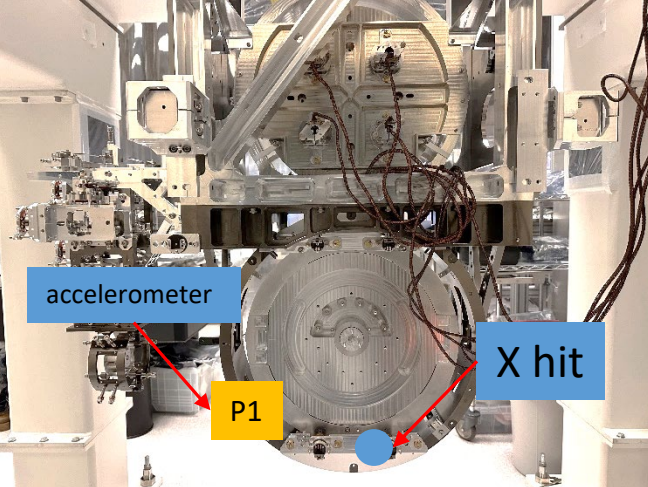
BBSS + HRTS

Side Dampers

Vibration Absorbers

Y-brace (HRTS)

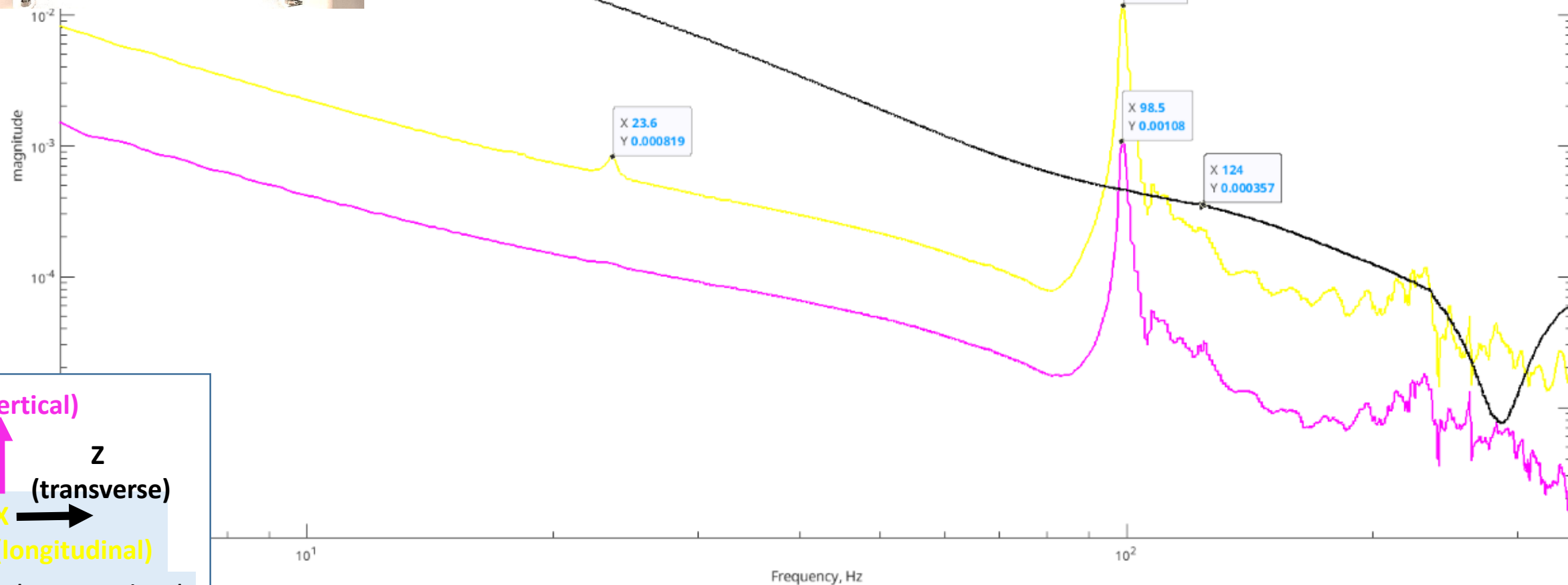




B&K Results for BBSS + HRTS (Triax accel at position 1) - Hammer impact on X-center

Test 6a BBSS + HRTS (X hit – center)

— x-axis with VA
— y-axis with VA
— z-axis with VA



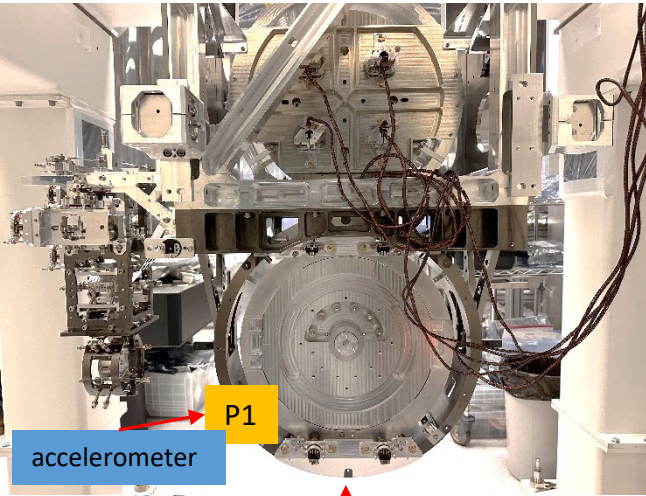
Y (vertical)
Z
(transverse)
X
(longitudinal)

Accelerometer axis and
hammer hit direction

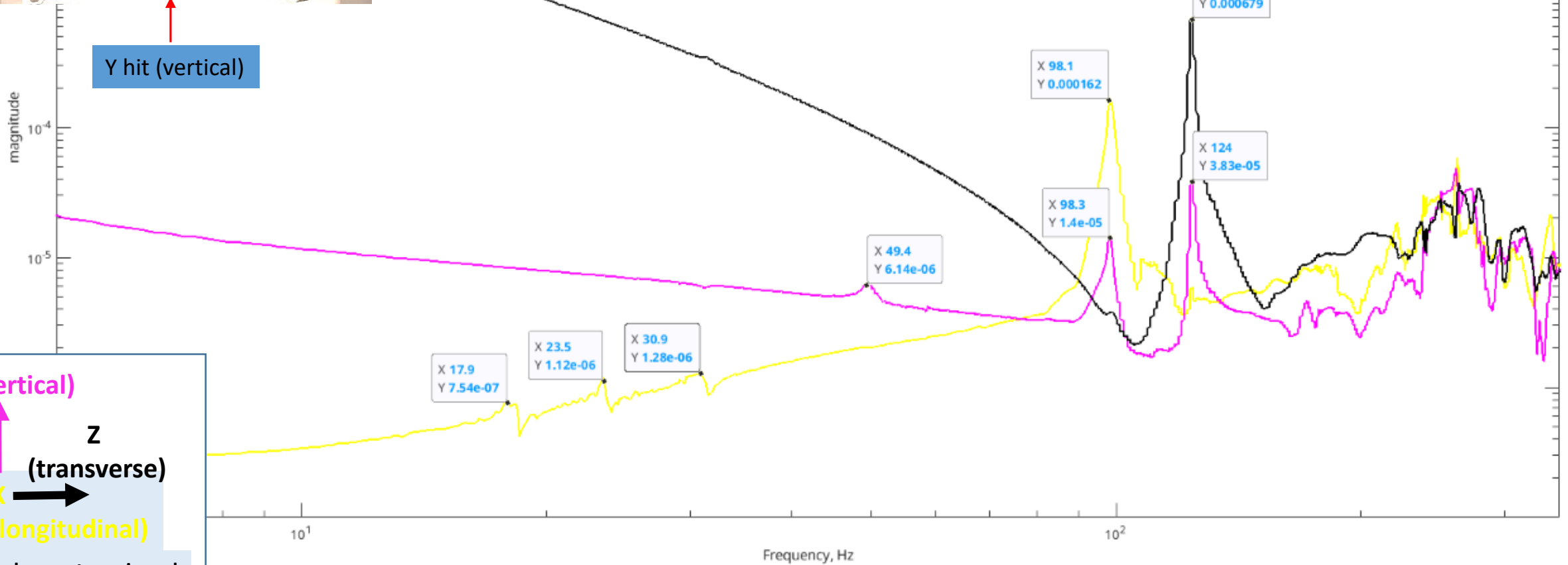
Hammer impact on Y-center

Test 6b
BBSS + HRTS
(Y hit – center)

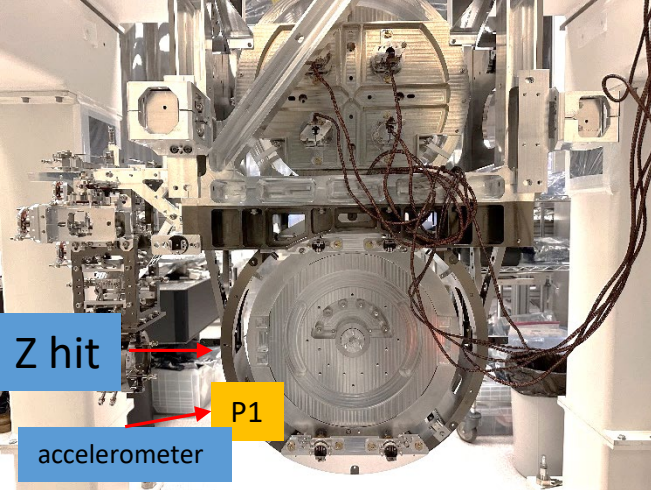
— x-axis with VA
— y-axis with VA
— z-axis with VA



Y hit (vertical)



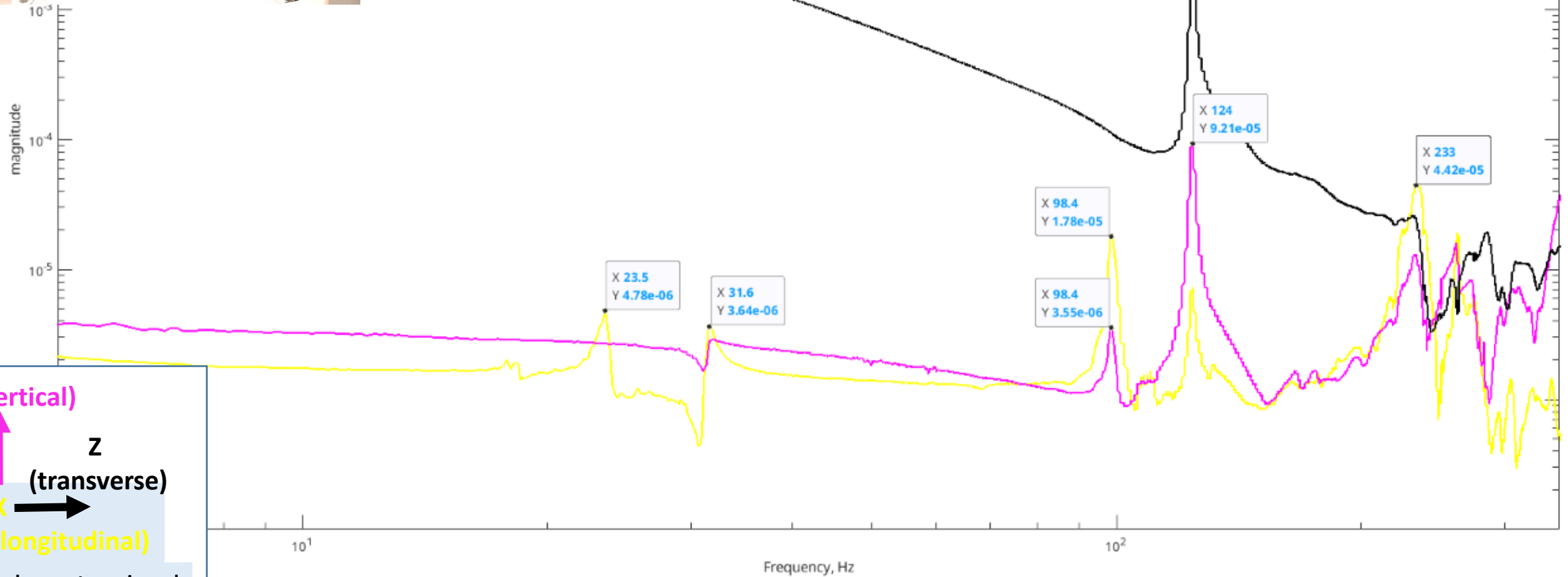
Y (vertical)
Z (transverse)
X (longitudinal)
Accelerometer axis and hammer hit direction



Hammer impact on Z-center

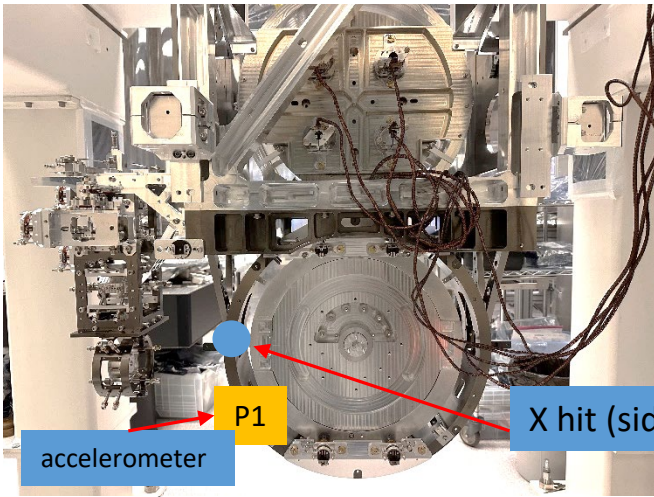
Test 6c
BBSS + HRTS
(Z hit – center)

— x-axis with VA
— y-axis with VA
— z-axis with VA



Y (vertical)
Z (transverse)
X (longitudinal)

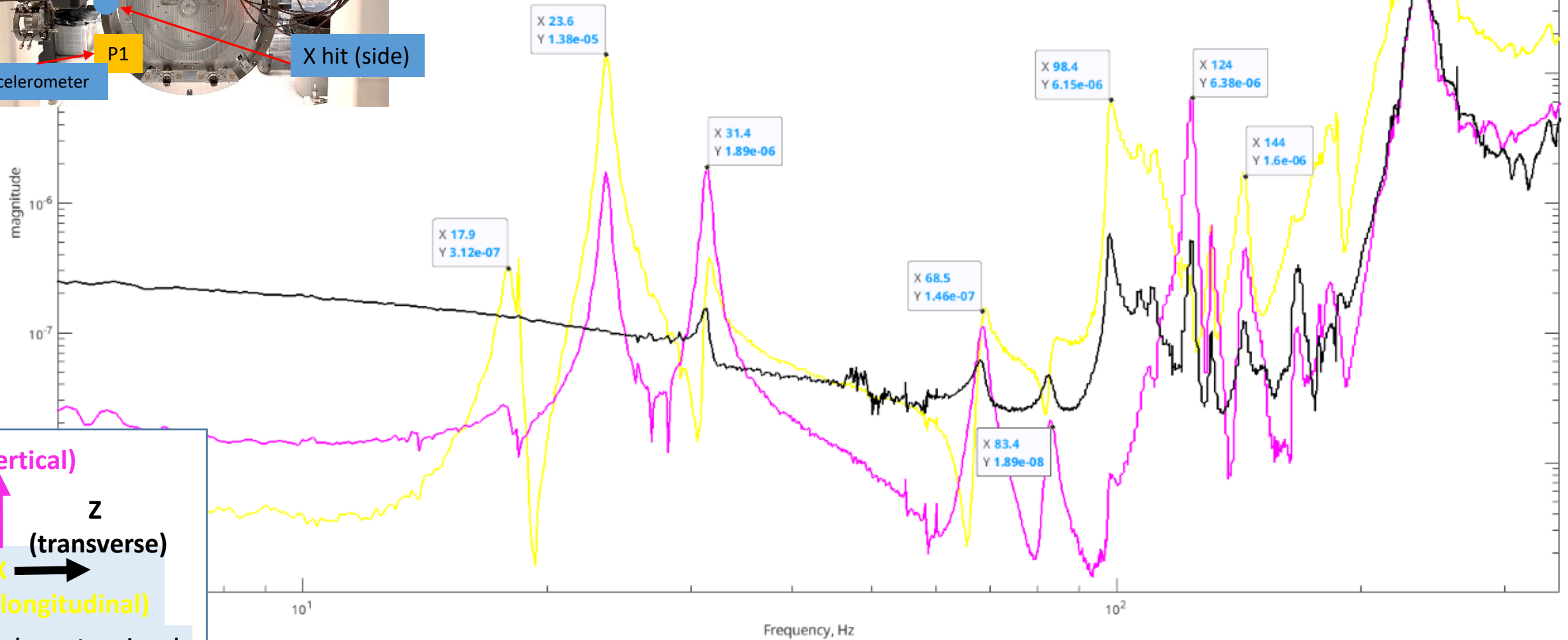
Accelerometer axis and
hammer hit direction



B&K Results for BBSS + HRTS (Triax accel at position 1) - Hammer impact on X-Left

Test 7a
BBSS + HRTS
(X hit – side)

— x-axis with VA
— y-axis with VA
— z-axis with VA



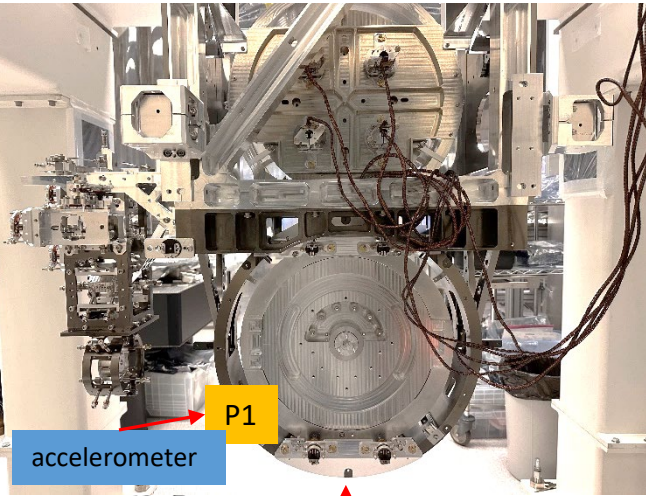
Y (vertical)
Z (transverse)
X (longitudinal)

Accelerometer axis and
hammer hit direction

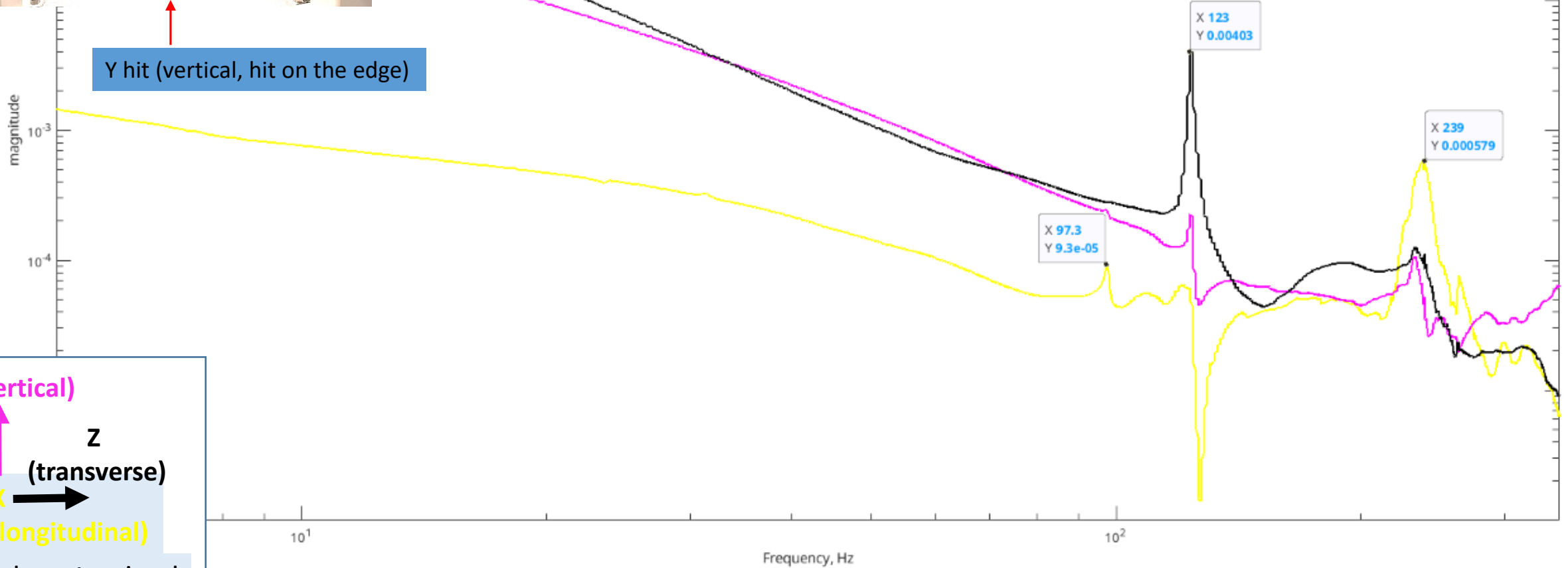
Hammer impact on Y-Left

Test 7b
BBSS + HRTS
(Y hit – side)

— x-axis with VA
— y-axis with VA
— z-axis with VA

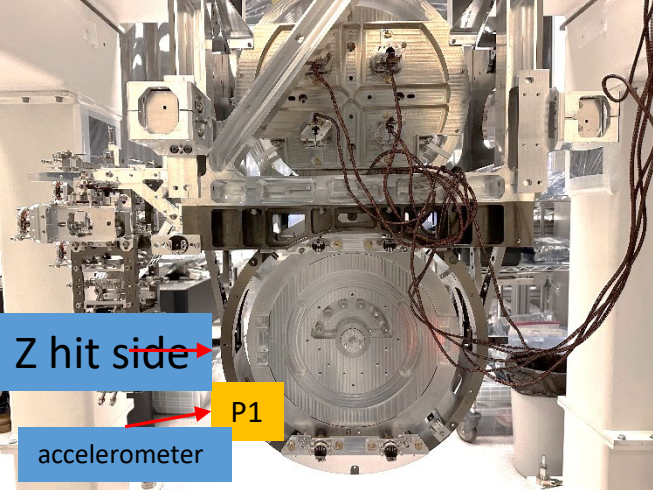


Y hit (vertical, hit on the edge)



Y (vertical)
Z (transverse)
X (longitudinal)

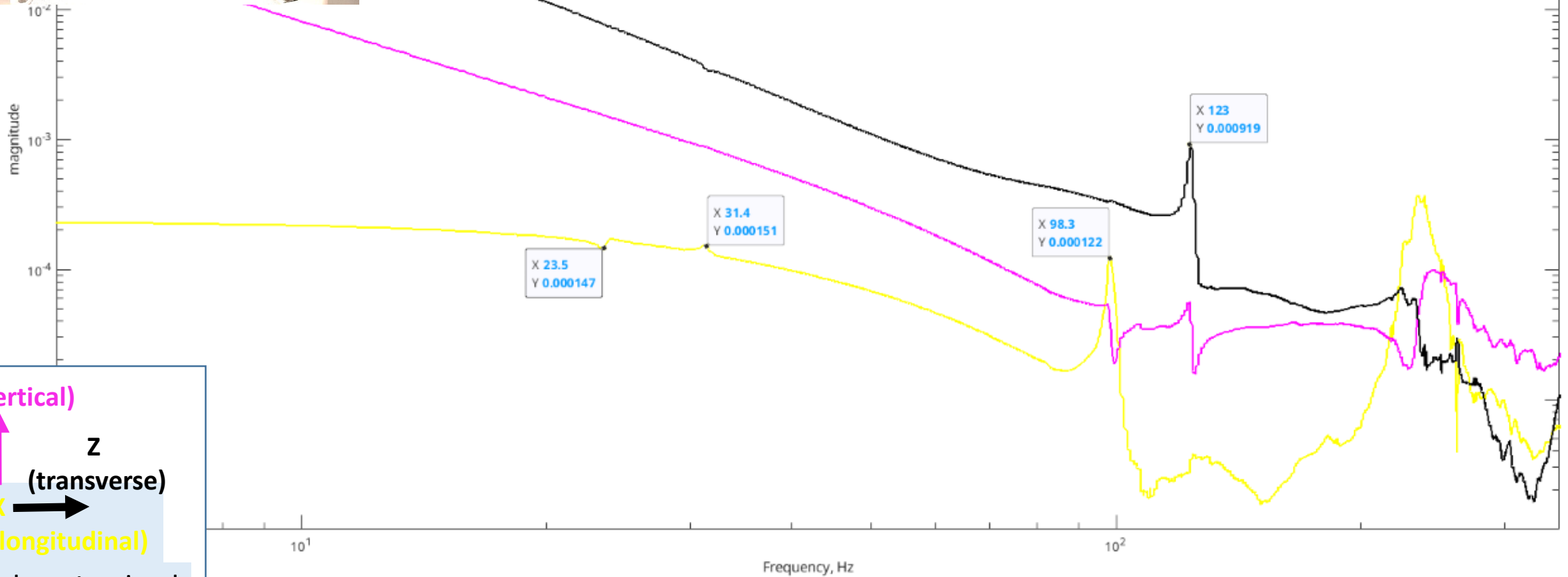
Accelerometer axis and
hammer hit direction



Hammer impact on Z-Left

Test 7c BBSS + HRTS (Z hit – side)

x-axis with VA
y-axis with VA
z-axis with VA



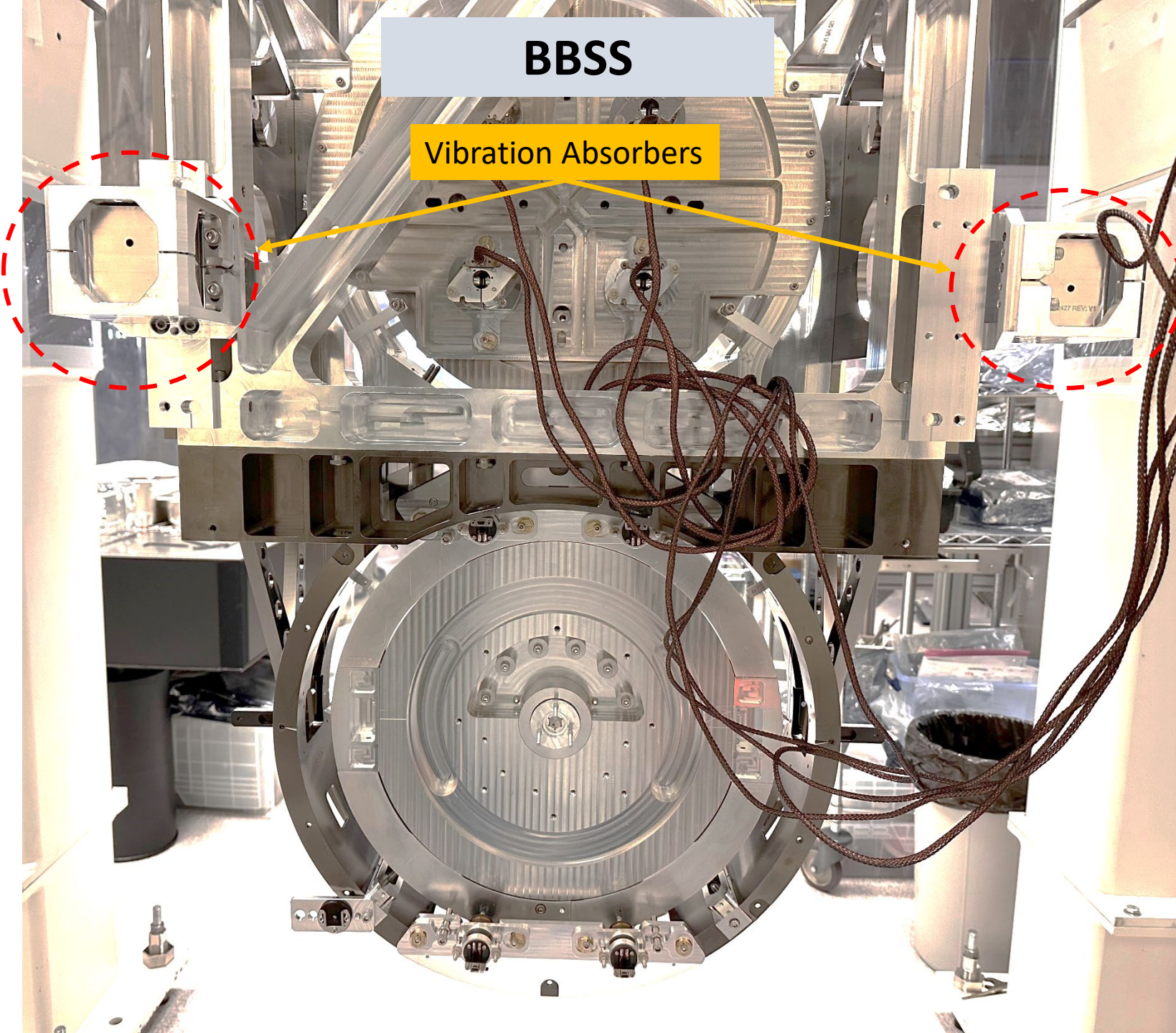
Y (vertical)
Z (transverse)
X (longitudinal)

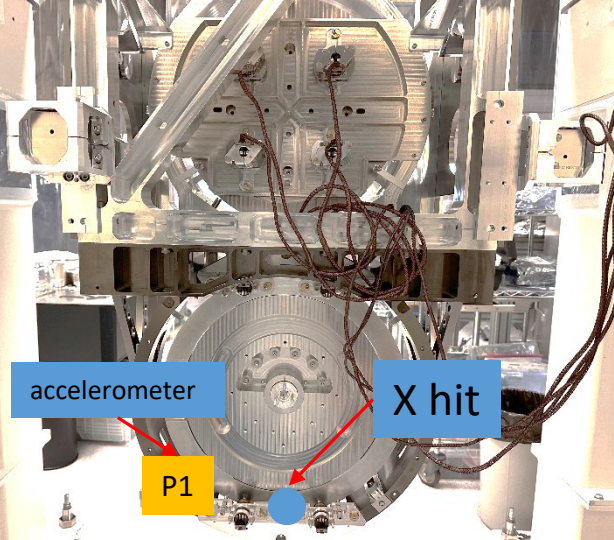
Accelerometer axis and
hammer hit direction

BBSS

Vibration Absorbers

HRTS removed

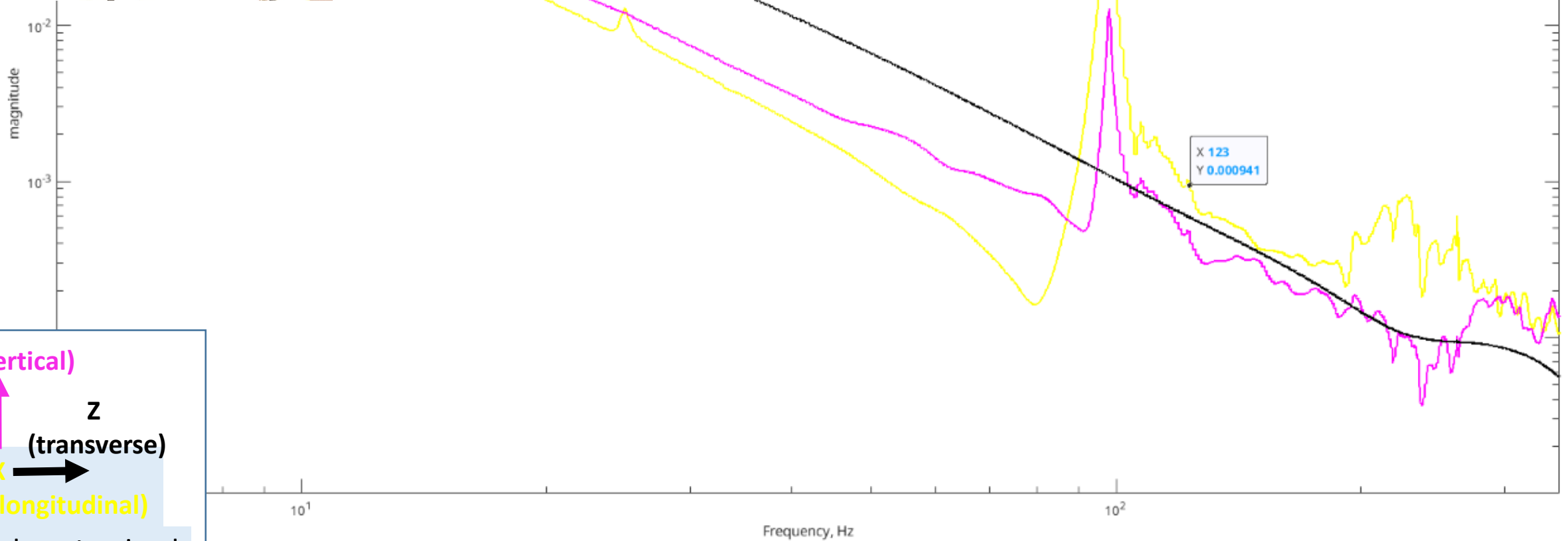




B&K Results for BBSS+VA (Triax accel at position 1) - Hammer impact on X-center

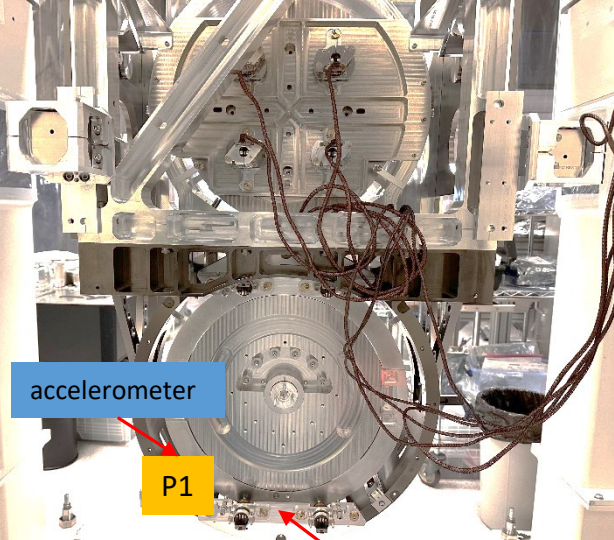
Test 8a BBSS (X hit – center)

x-axis with VA
y-axis with VA
z-axis with VA



Y (vertical)
Z (transverse)
X (longitudinal)

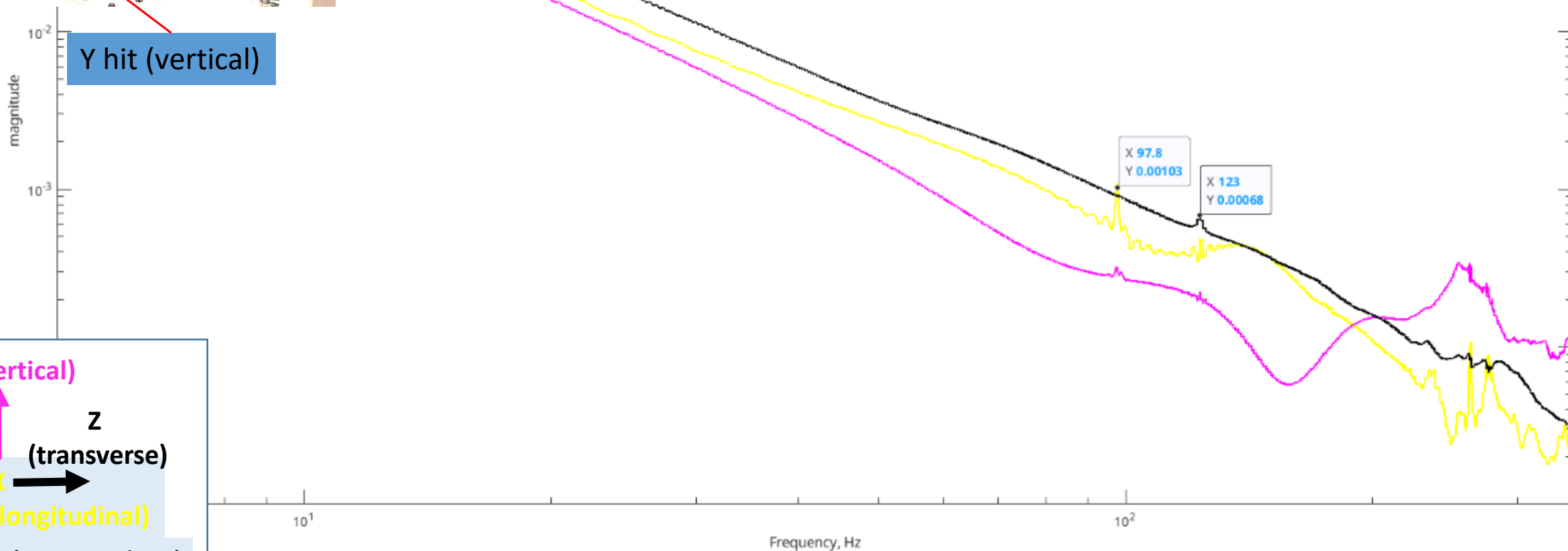
Accelerometer axis and
hammer hit direction



Hammer impact on Y-center

Test 8b BBSS (Y hit – center)

x-axis with VA
y-axis with VA
z-axis with VA



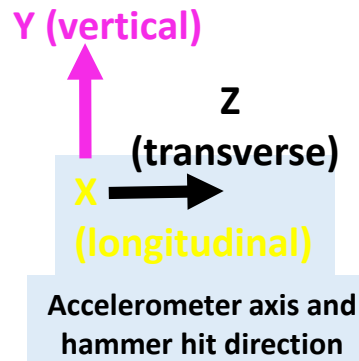
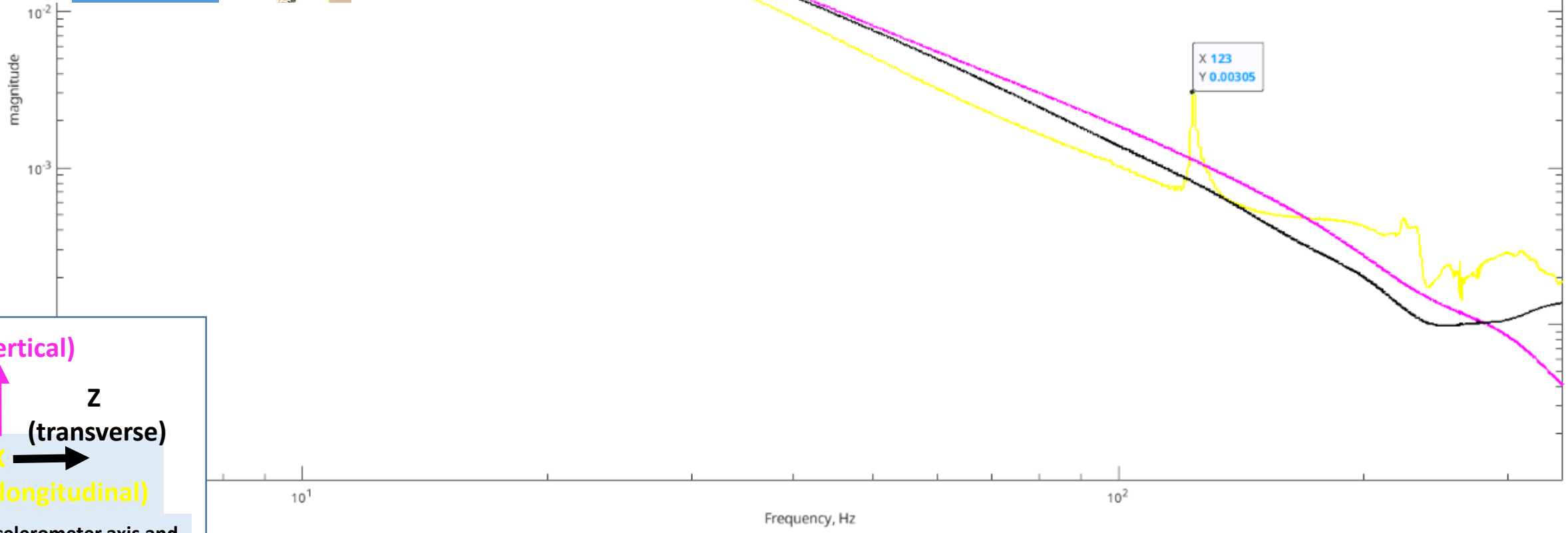
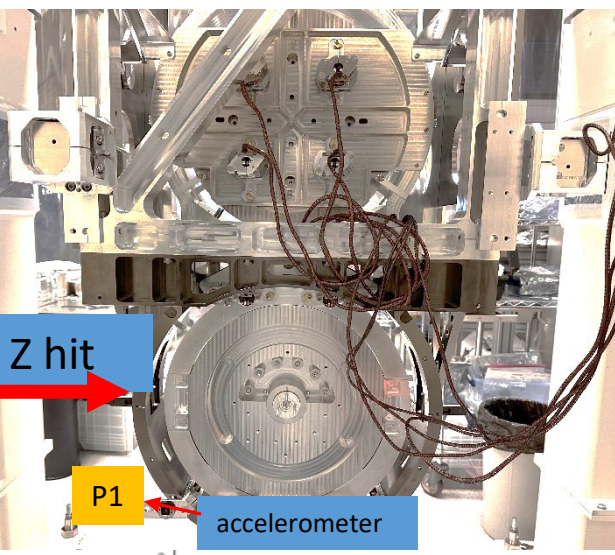
Y (vertical)
Z
(transverse)
X
(longitudinal)

Accelerometer axis and
hammer hit direction

Hammer impact on Z-center

Test 8c BBSS (Z hit – center)

x-axis with VA
y-axis with VA
z-axis with VA



Test 9a

BBSS

(X hit – side)

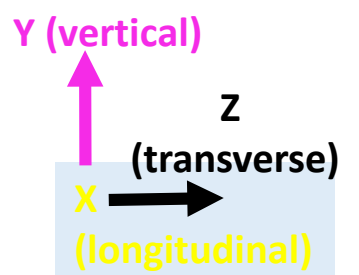
- x-axis with VA
- y-axis with VA
- z-axis with VA

X hit

accelerometer

P1

magnitude



Accelerometer axis and hammer hit direction

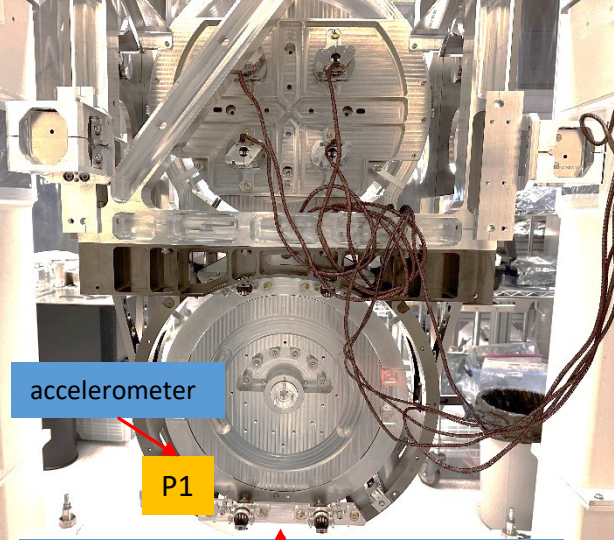
X 25
Y 0.00789

X 97.9
Y 0.00169

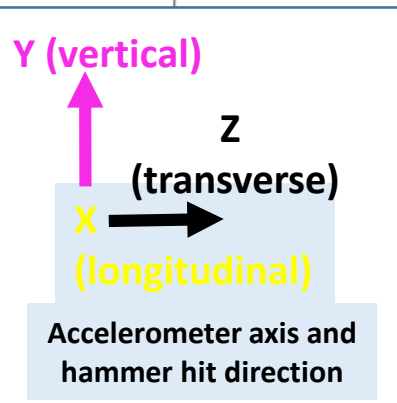
X 124
Y 0.000186

X 233
Y 0.00479

Frequency, Hz



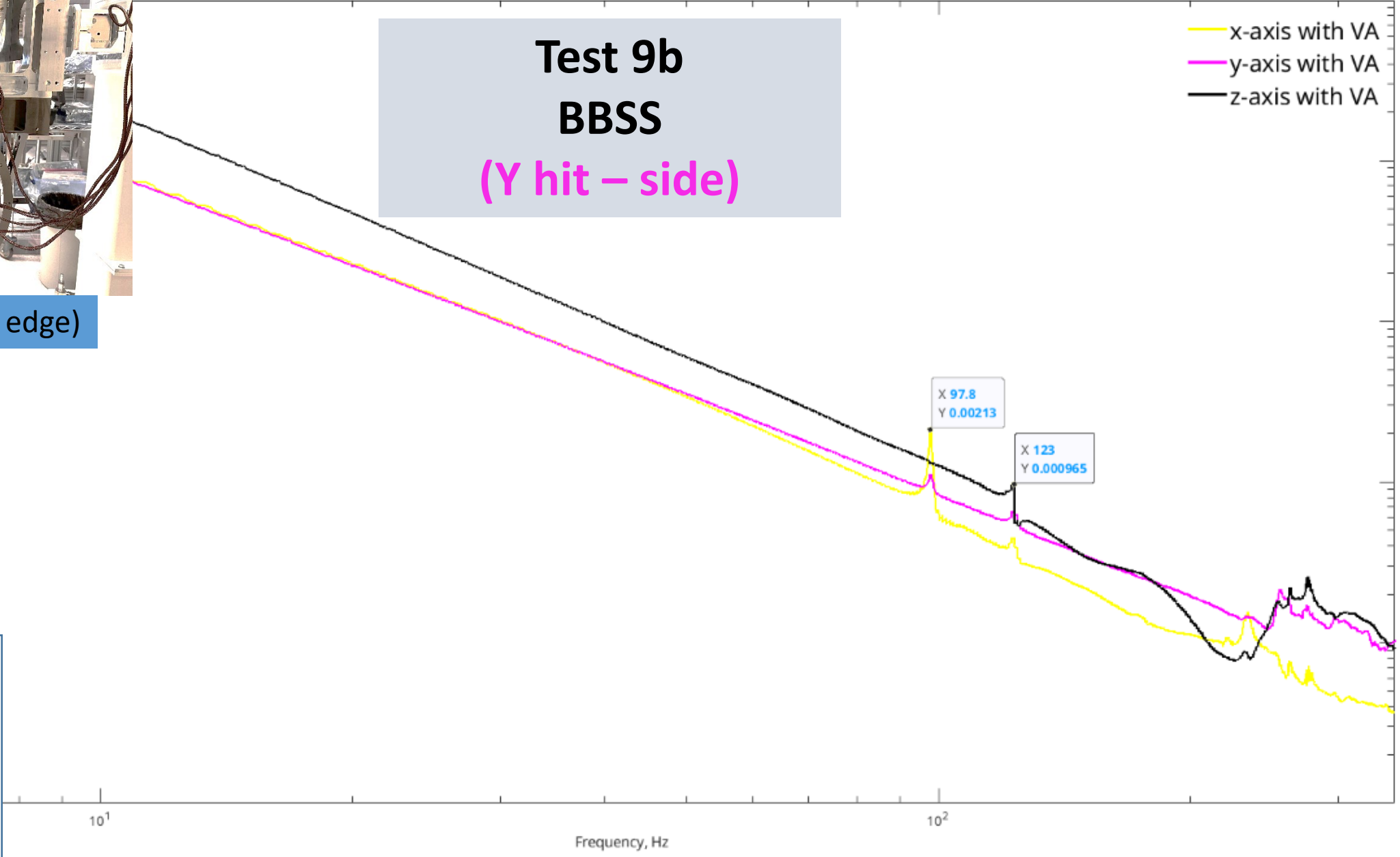
Y hit (vertical – side edge)



Hammer impact on Y-side

Test 9b BBSS (Y hit – side)

- x-axis with VA
- y-axis with VA
- z-axis with VA



Hammer impact on Z-side

Test 9c BBSS (Z hit – side)

x-axis with VA
y-axis with VA
z-axis with VA

Z hit (side edge)

P1

accelerometer

magnitude

10^{-2}

10^{-3}

Y (vertical)

Z

(transverse)

X

(longitudinal)

Accelerometer axis and
hammer hit direction

Frequency, Hz

10^2

10^1