

# Hg System Testing Status

**V.B. Graves**

**P.T. Spampinato**

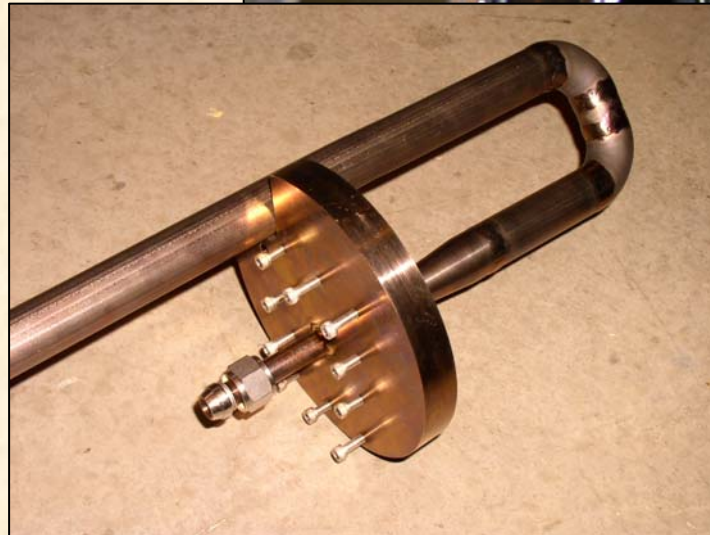
**A.J. Carroll**

**MERIT VRVS Meeting**

**Feb 7, 2007**

## Ti Nozzle Installed

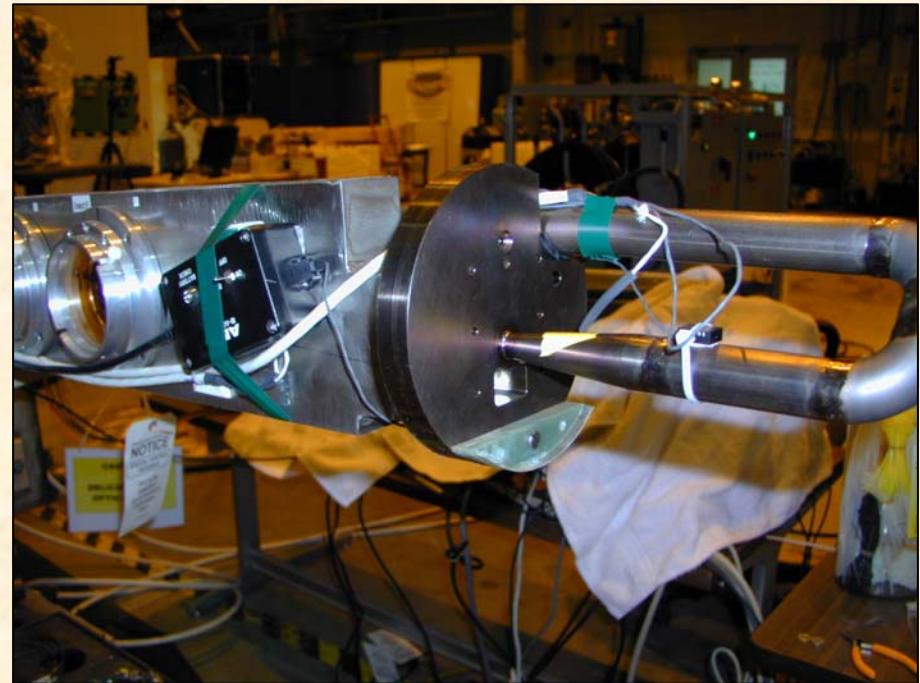
- **Length issue corrected**
  - New weld at  $Z=0$
  - Introduced slight angle change in pipe
- **Modified assembly x-rayed and pressure tested**
- **Nozzle length unchanged at this point**



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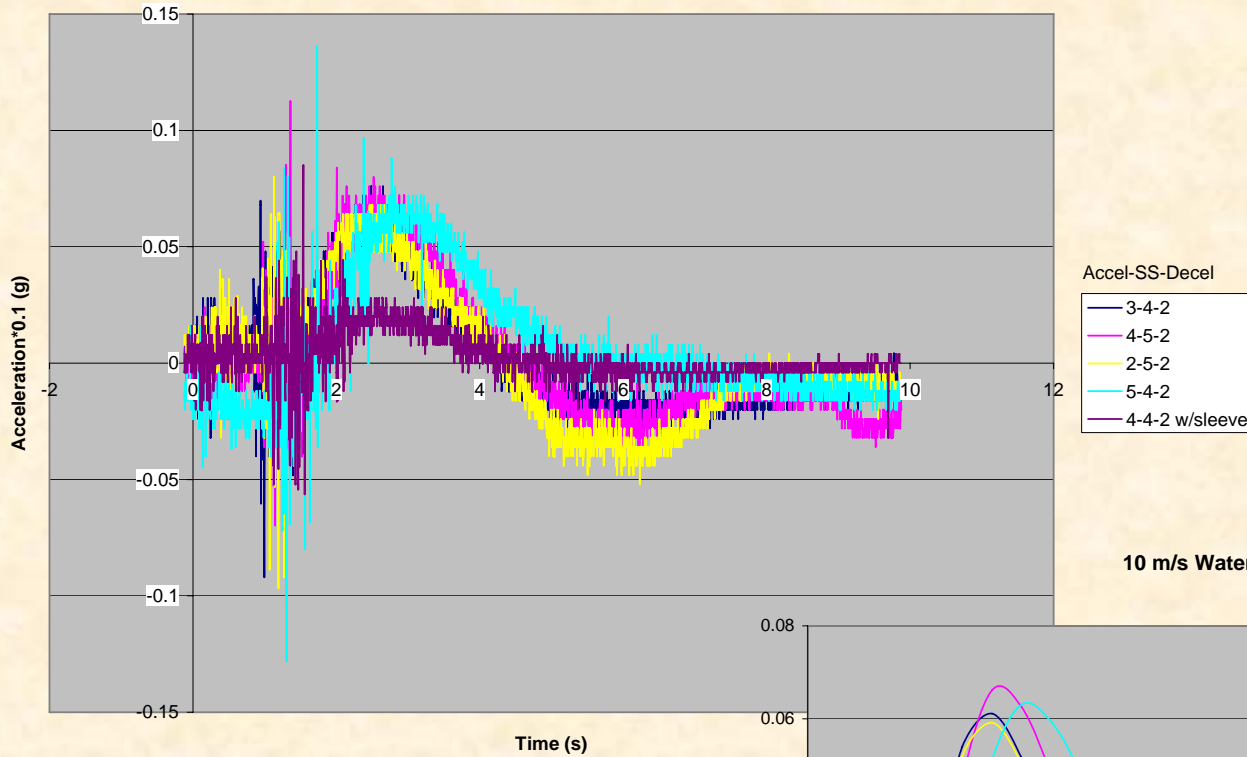
# Vibration Testing Initiated

- Accelerometer placed upstream of nozzle
- Oriented for vertical measurements
- Observing effects of different velocity profiles

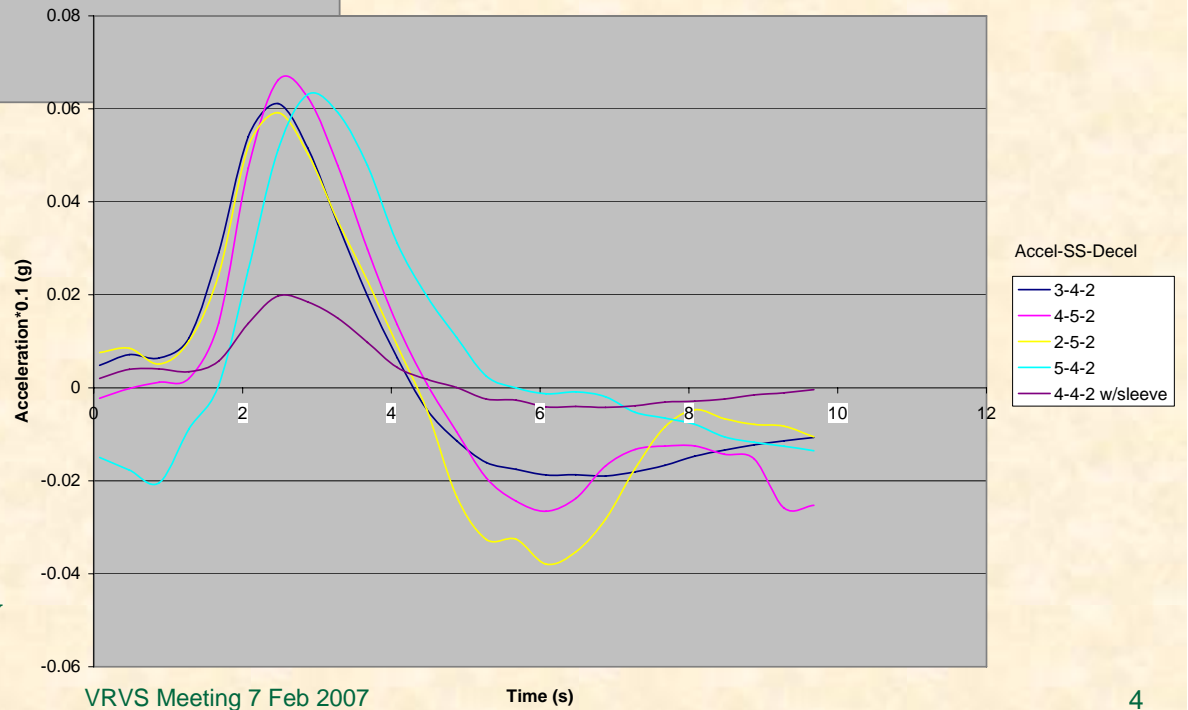




10 m/s Water Data

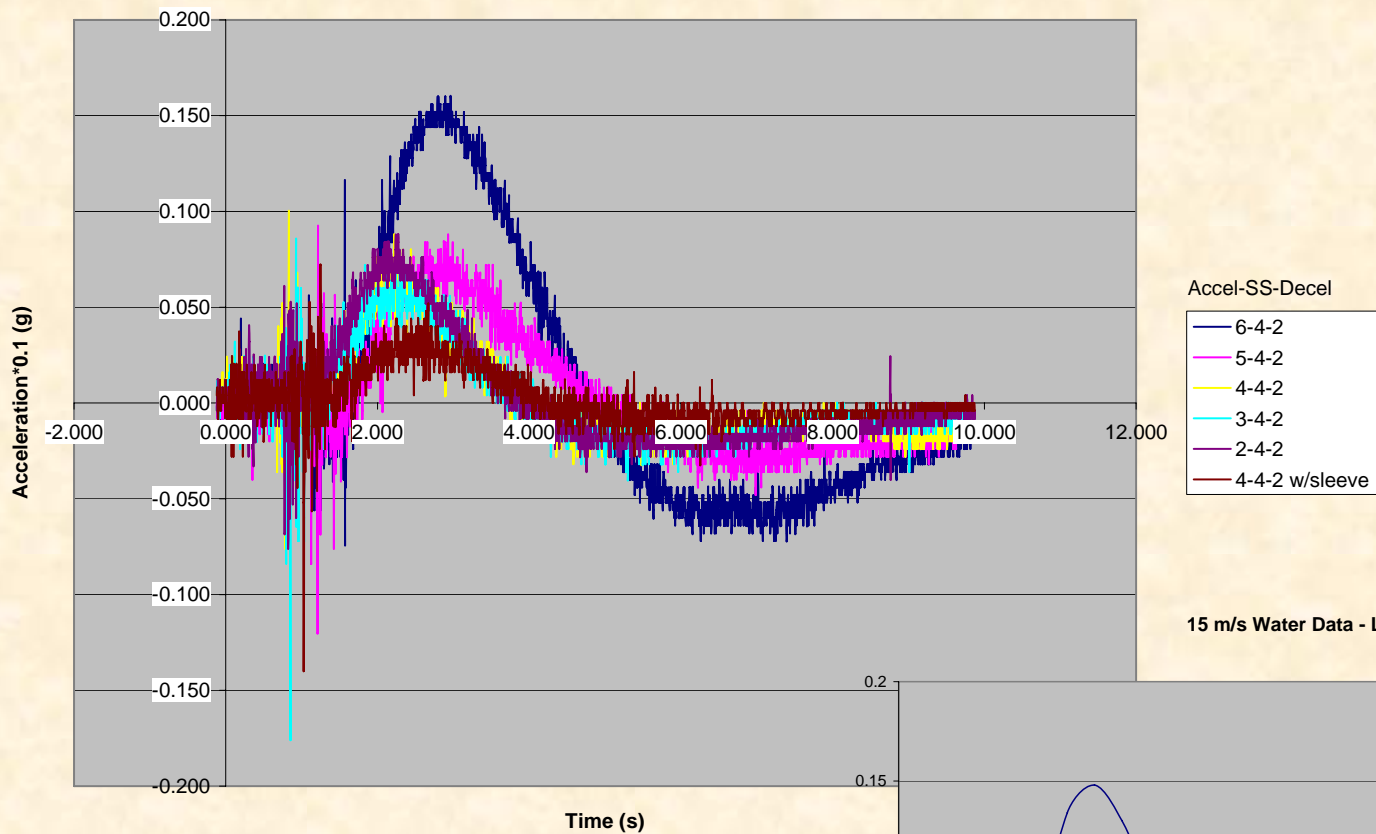


10 m/s Water Data - Low Frequency

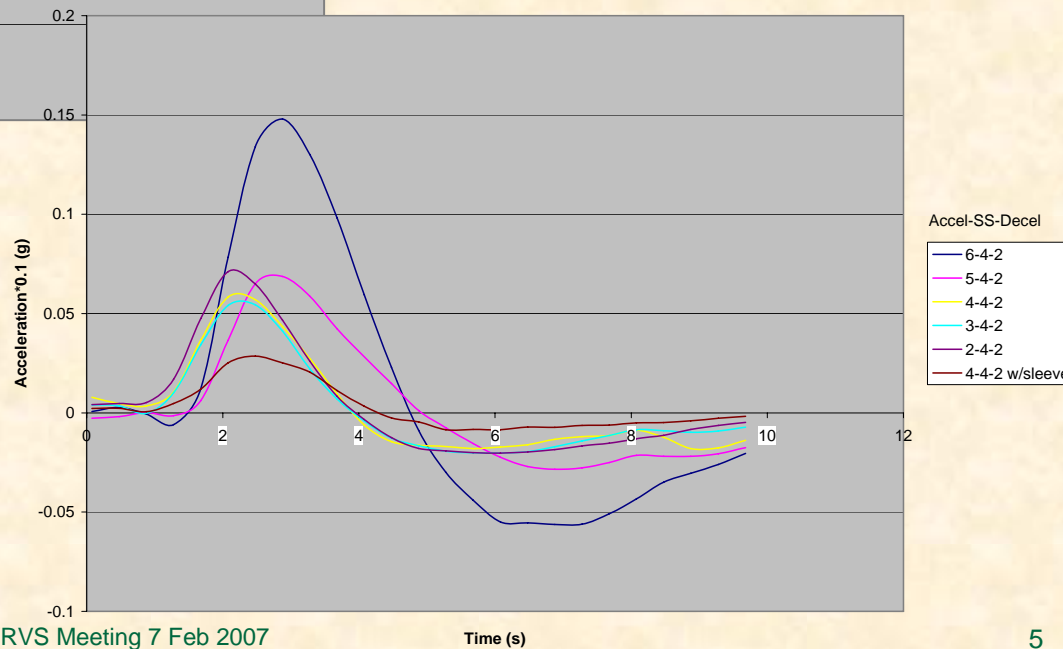


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### 15 m/s Water Data



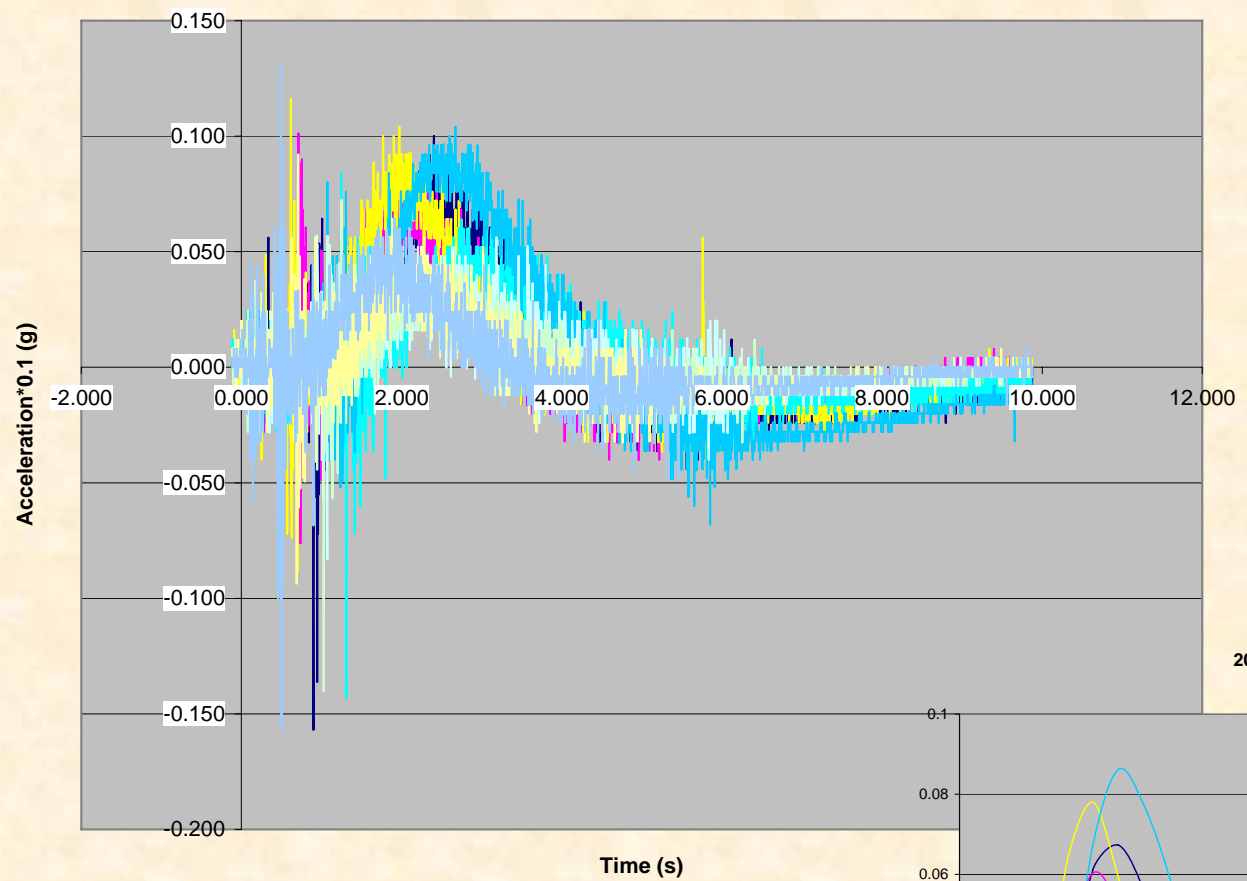
### 15 m/s Water Data - Low Frequency



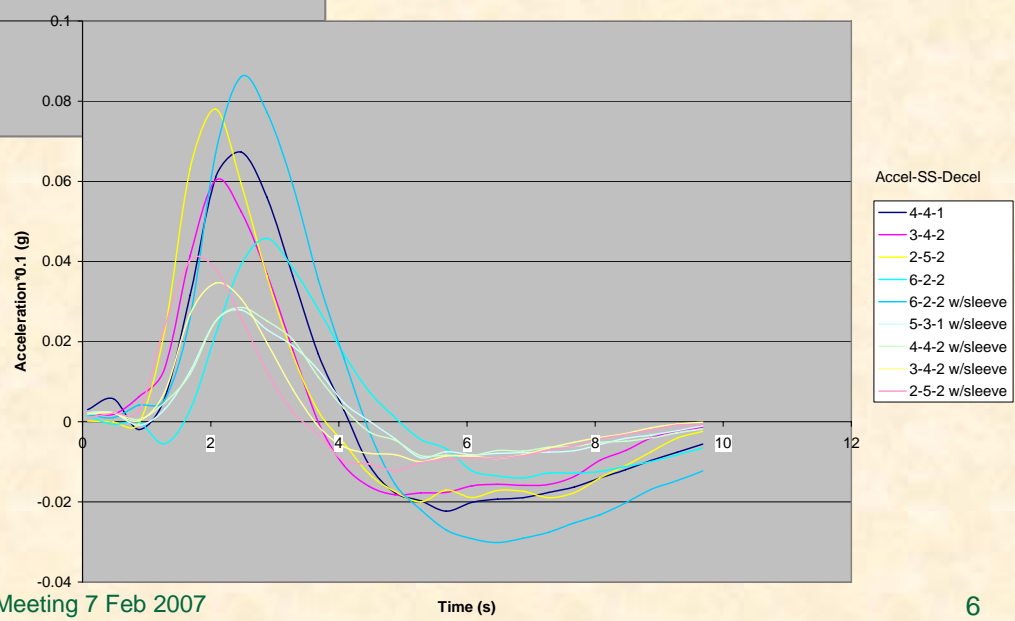
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20 m/s Water Data



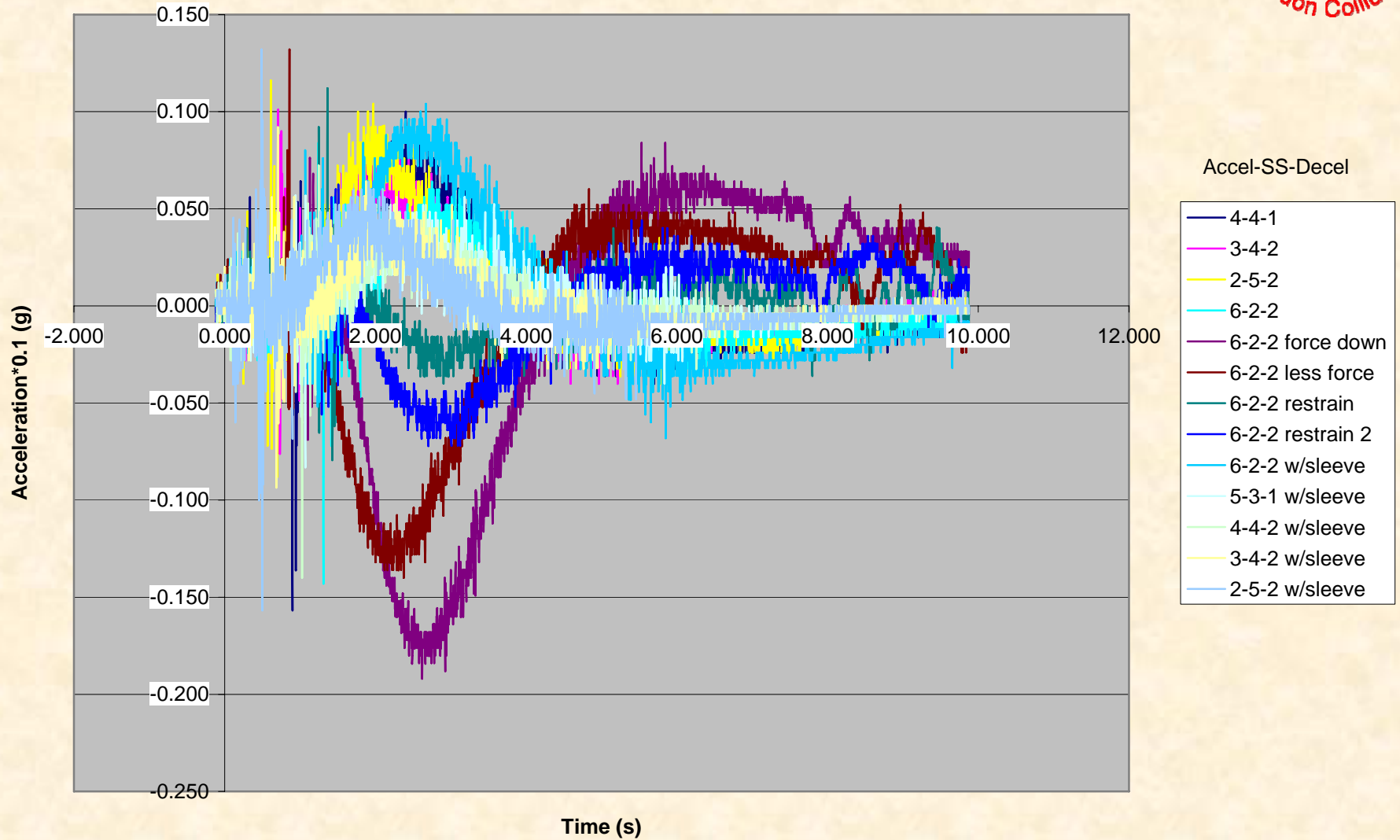
20m/s Water Data - Low Frequency



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### 20 m/s Water Data





# Observations

- **Ramp-up time can affect amplitude of vibration**
- **Suggests less vibration issues if beam pulse occurs later on the steady-state portion of jet profile**
- **Comparison of diagnostic images to vibration data not yet completed**
- **Water vibration data is interesting for reference, but may not correlate with Hg data**





# Next Steps

- **Observe effects of shortening nozzle tip**
  - Current nozzle tip length ~70mm
  - Design length ~5mm
- **Switch to Hg**
  - Drain water, clean viewports, dry primary containment
  - Reassemble primary & pressure test
  - Close secondary containment and leak check