

Preliminary Vibration Analysis of Transverse Pier Loading

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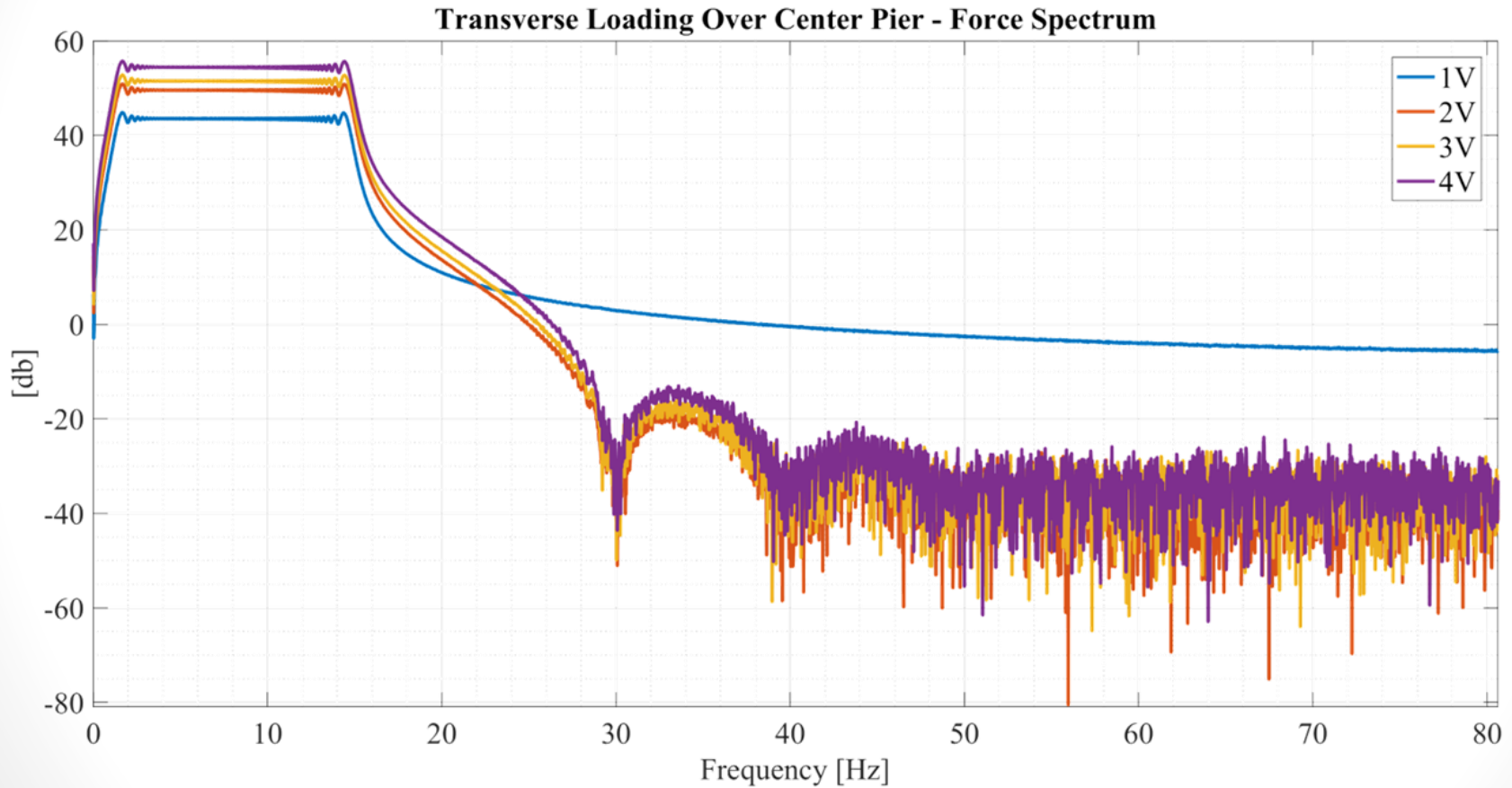
Pier Instrumentation



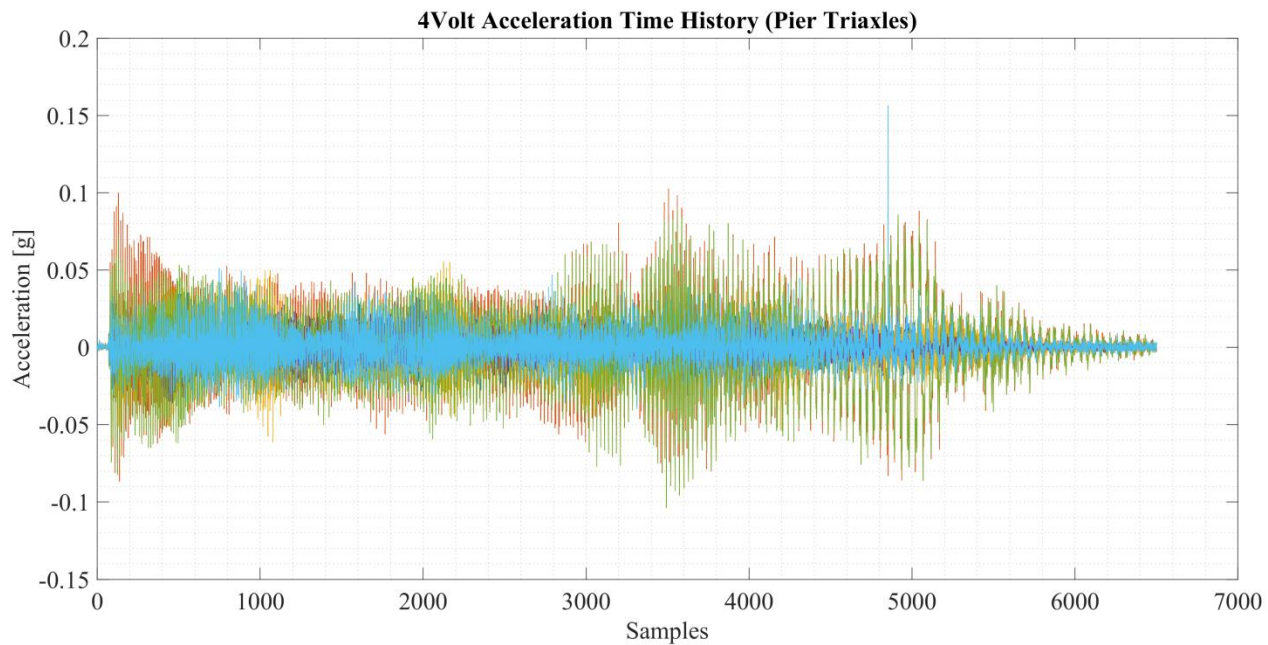
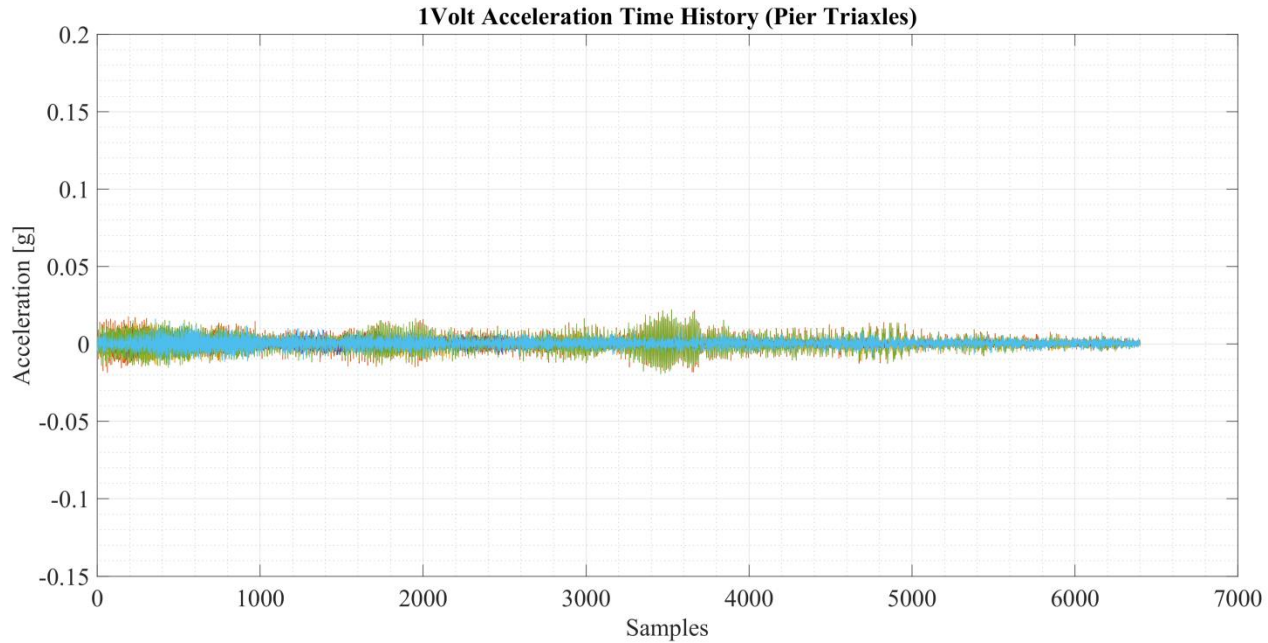
Triaxle Velocity

Triaxle Acceleration

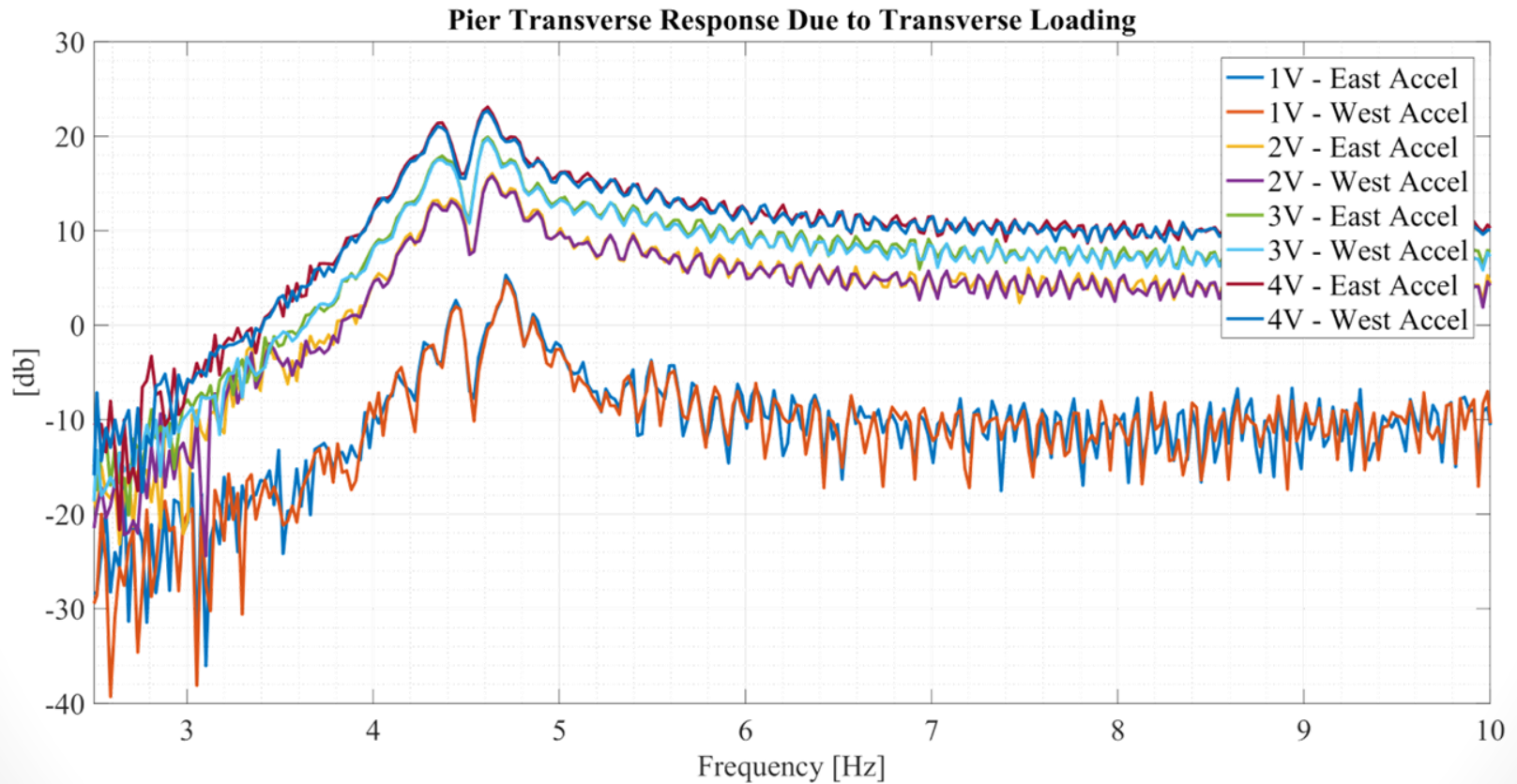
Transverse Input Spectrum



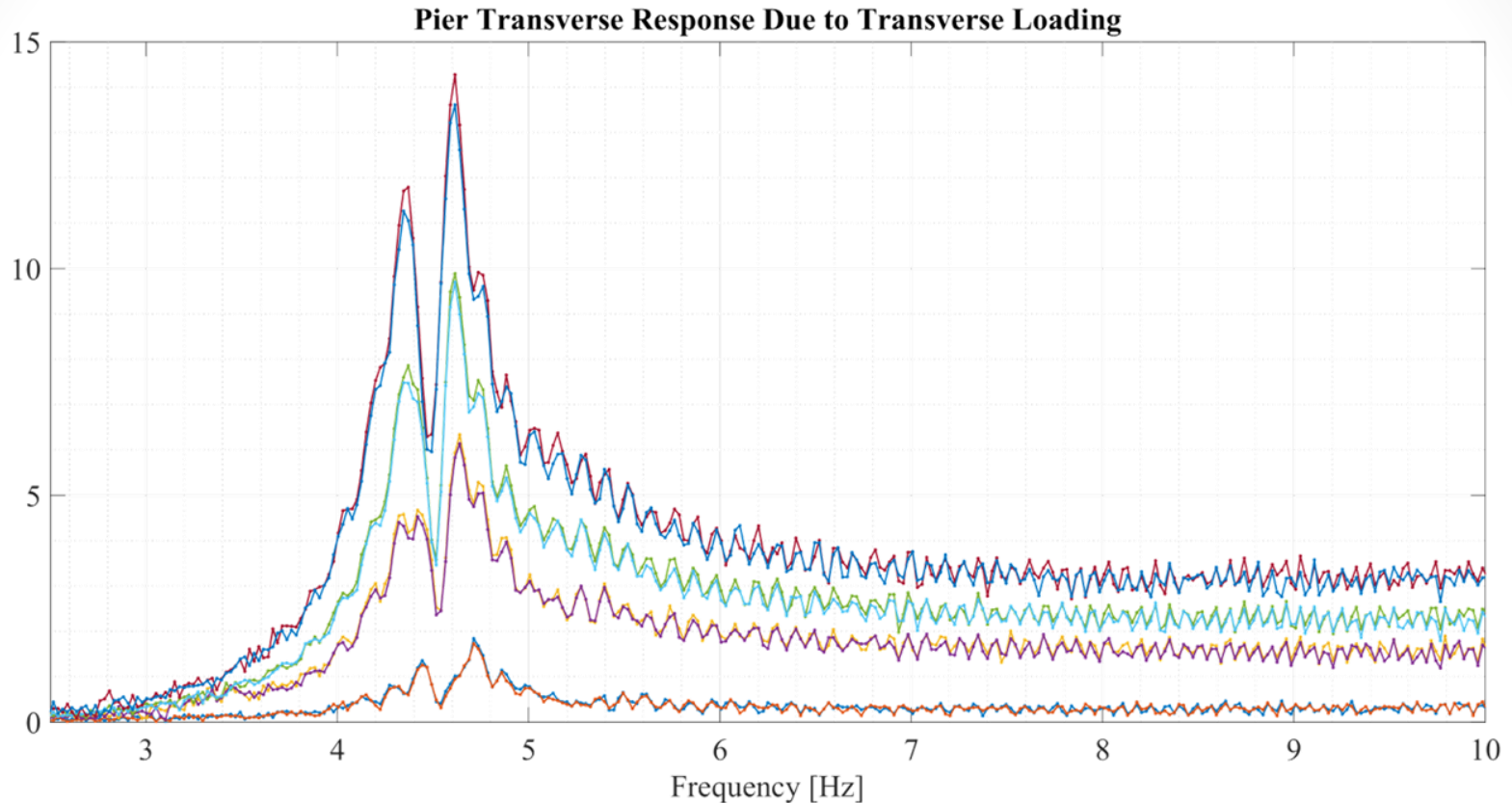
Acceleration Time Histories



Transverse Response Spectrum

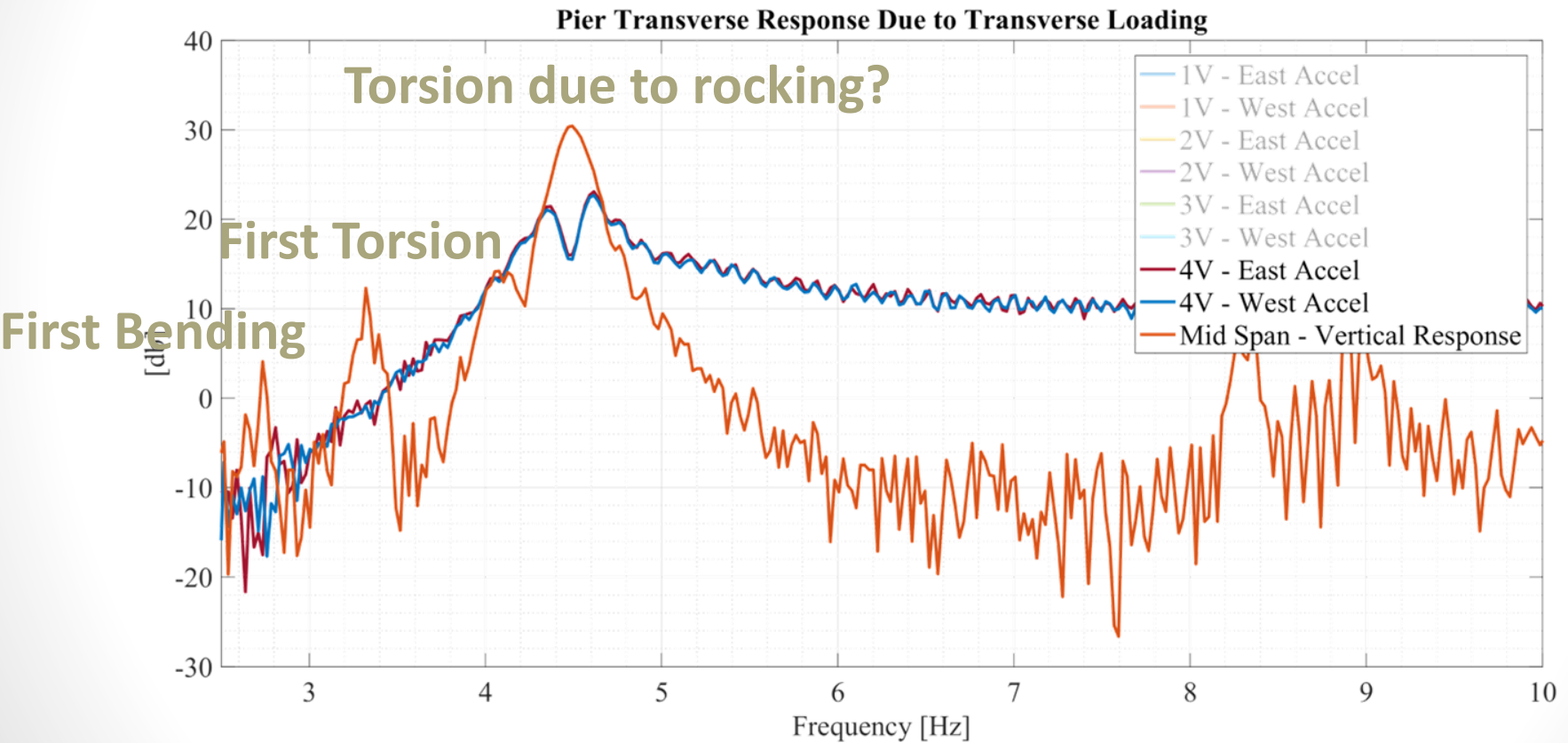


Transverse Response Spectrum



Load Level	Frequency 1 [Hz]	Frequency 2 [Hz]
1V	4.443	4.712
2V	4.419	4.639
3V	4.37	4.614
4V	4.37	4.614

Vertical Response Spectrum



To Do

- Record averaging
- Transfer function
 - The records shown are the response due to the spectral input. Developing the transfer function will normalize the output records due to each input
- Superstructure modal analysis
 - Isolate super structure modes to ensure the observed response is largely rocking of pier