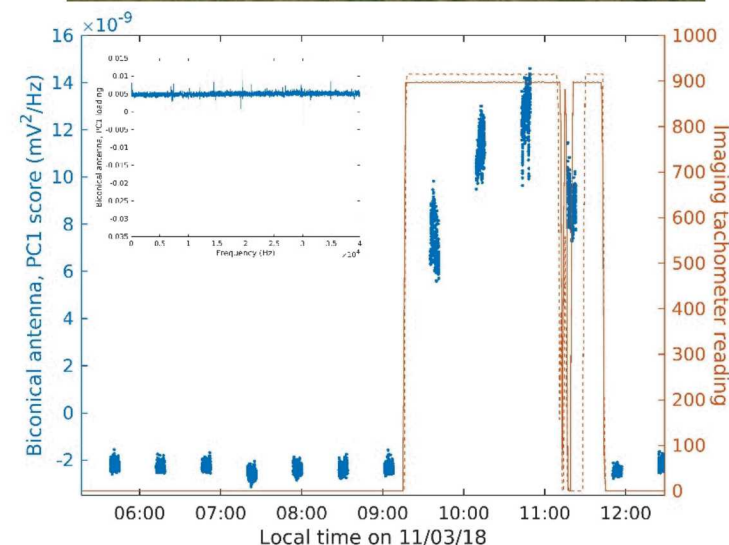




Assessing Electromagnetic Emanations from HFIR's Secondary Coolant System

- We are assessing the potential of electromagnetic (EM) emanations to provide a component-level (e.g., pumps, fans) understanding of the secondary coolant system
 - Such an understanding could prove pivotal in interpreting reactor status and anticipating reactor start-up.
- We are persistently collecting (at an 18.5% duty cycle) via four antennas deployed in the vicinity of the secondary cooling system, and identifying key spectral features via principal components analysis (PCA)
- Comparing PC1 to tachometer output, the biconical antenna is shown to exhibit a broadband response to fan motion.



Poster #14

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