

## Project Description

- Identify and reconstruct major sound sources with small number of microphone measurements
- Decrease the cost and measurement difficulty to identify sound source location for industrial use

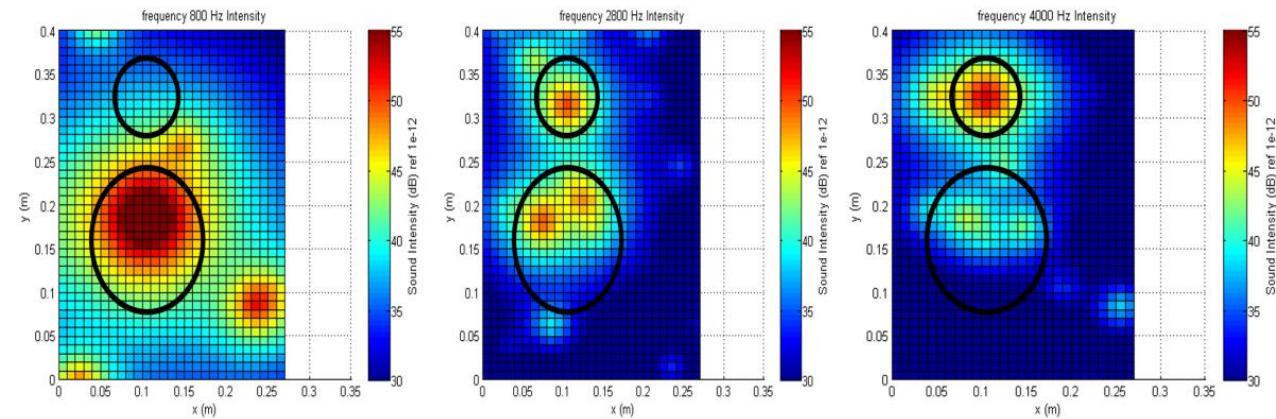
## Approach

- Apply compressive sensing principles to equivalent source method
  - Two methods proposed: Wideband Acoustical Holography and convex optimization
  - Under the assumption that the solution should be sparse, the sound source location can be identified with a low spatial sampling rate
  - By balancing the solution sparsity and accuracy, a stable solution indicating sound source location can be found

## Discussion

- It is possible to find the major sound source locations with small number of microphone measurements using compressive sensing method

## Results



**Major sound source locations can be identified with small number of measurements**