

# Robust Vibration Localization with Swarm-Intelligent Systems

Swarm Intelligence  
Final Presentation  
*Fall 2006*

**WE ARE BACK!**

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# Talk Outline

- **Beyond limitations**
- Experiment 1
  - Wave signals
  - Cross-correlation
  - Graphical solution
- Experiment 2
  - Wave signals
  - Cross-correlation
  - Graphical solution
- Questions

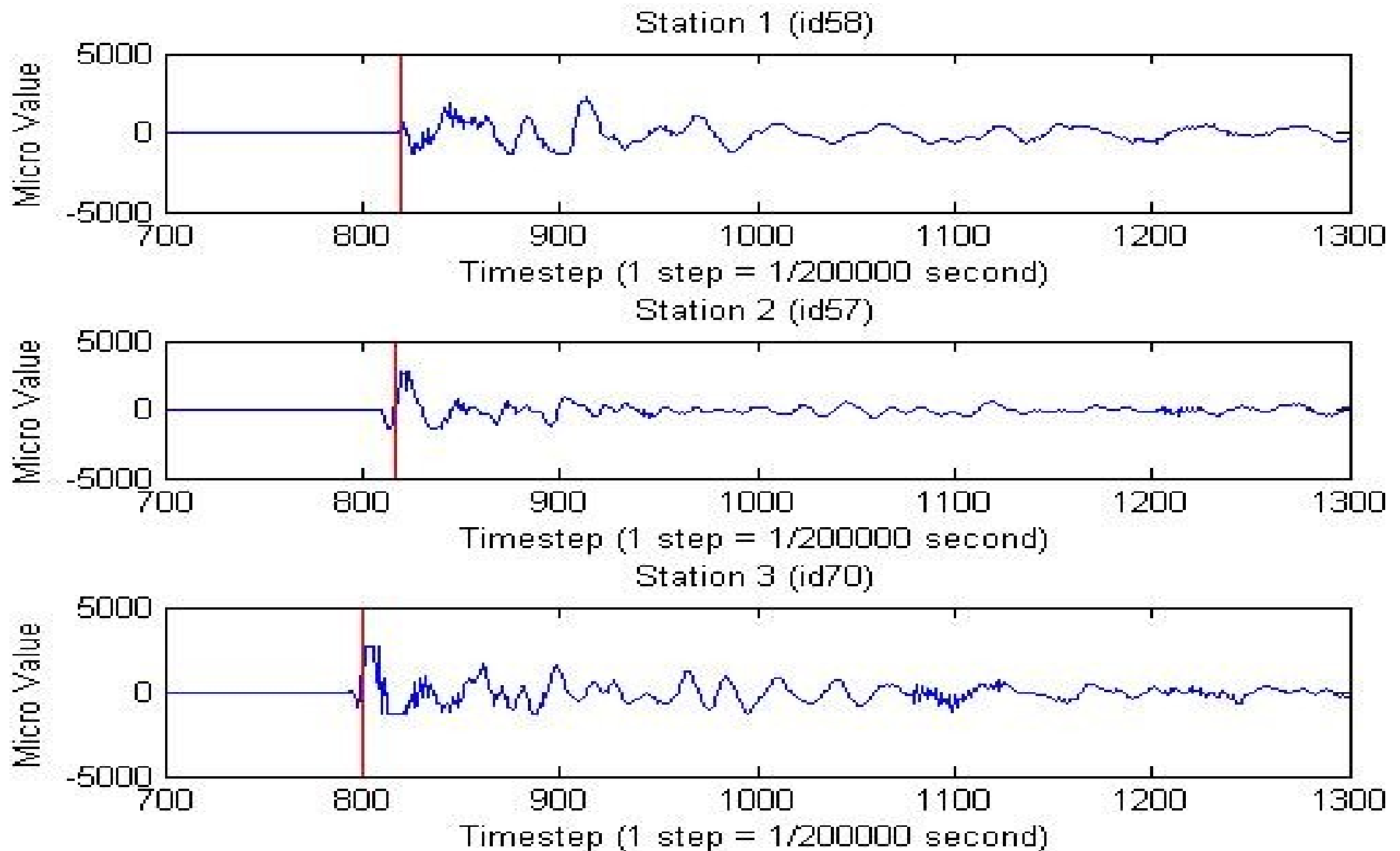
# Beyond Limitations

- Microphone instead of accelerometer
- Overpass the 150Hz bandwidth response

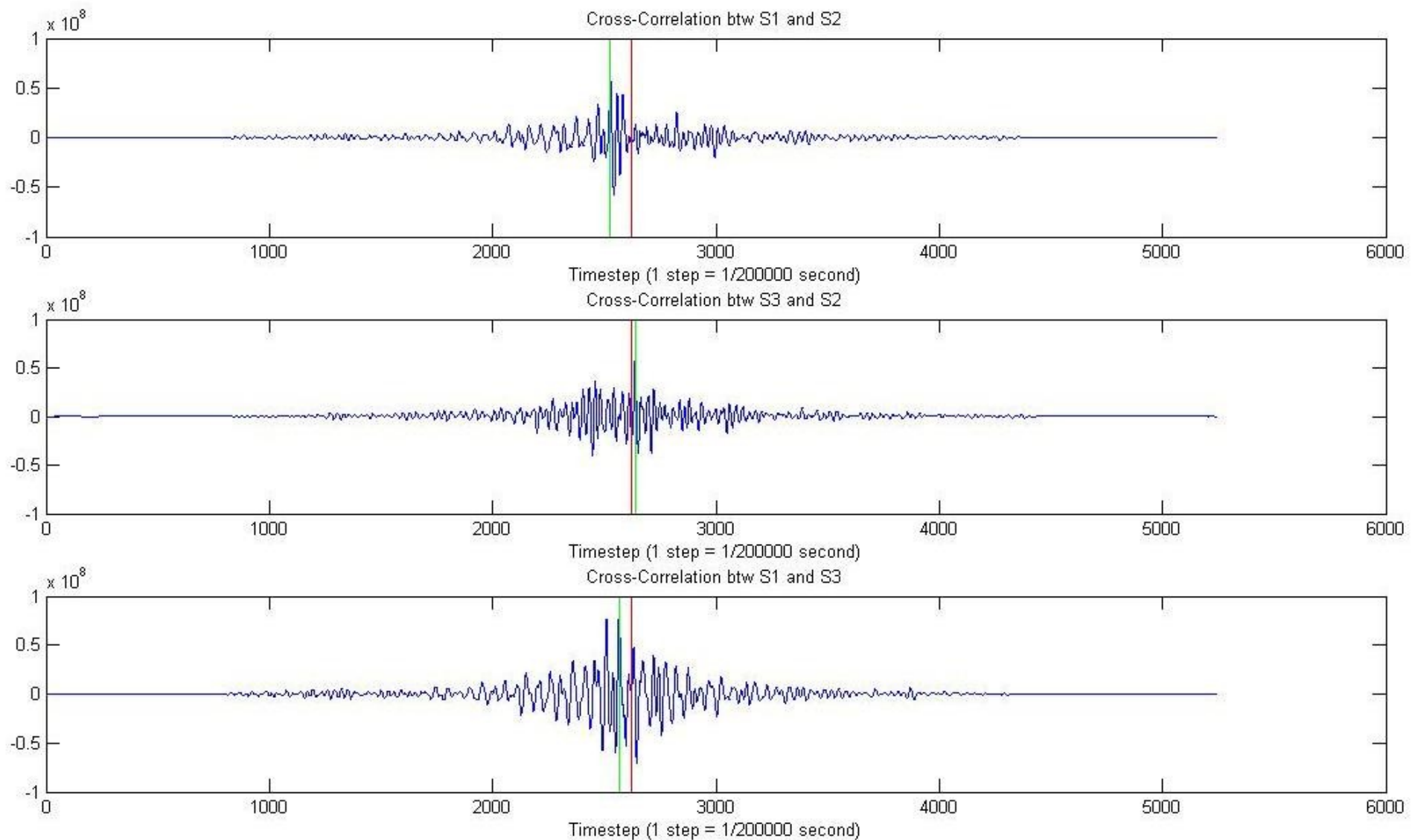
# Talk Outline

- **Using Microphone**
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  - Cross-correlation
  - Graphical solution
- Experiment 2
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  - Graphical solution
- Questions

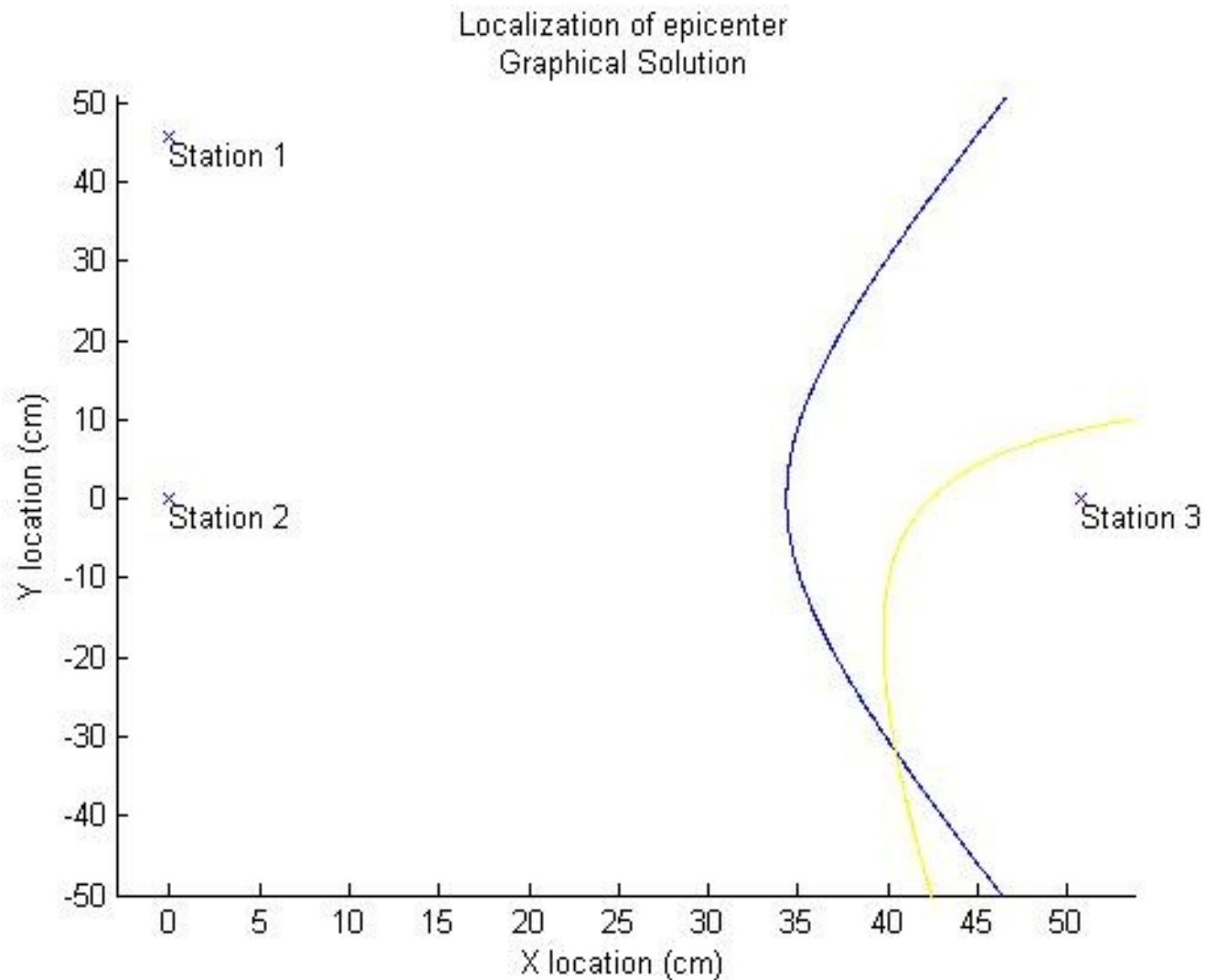
# Wave signals (1)



# Cross-Correlation (1)



# Graphical solution (1)

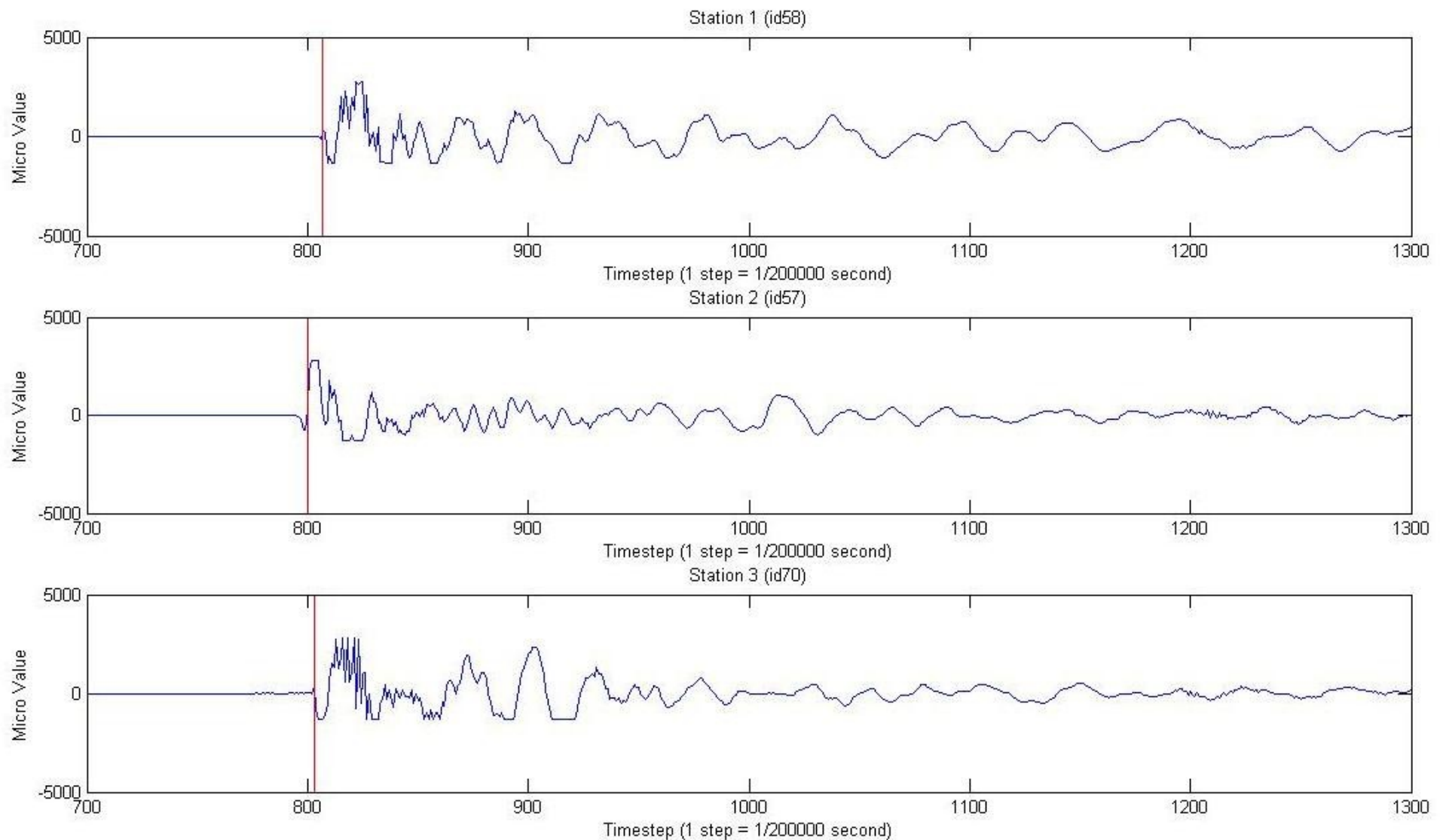


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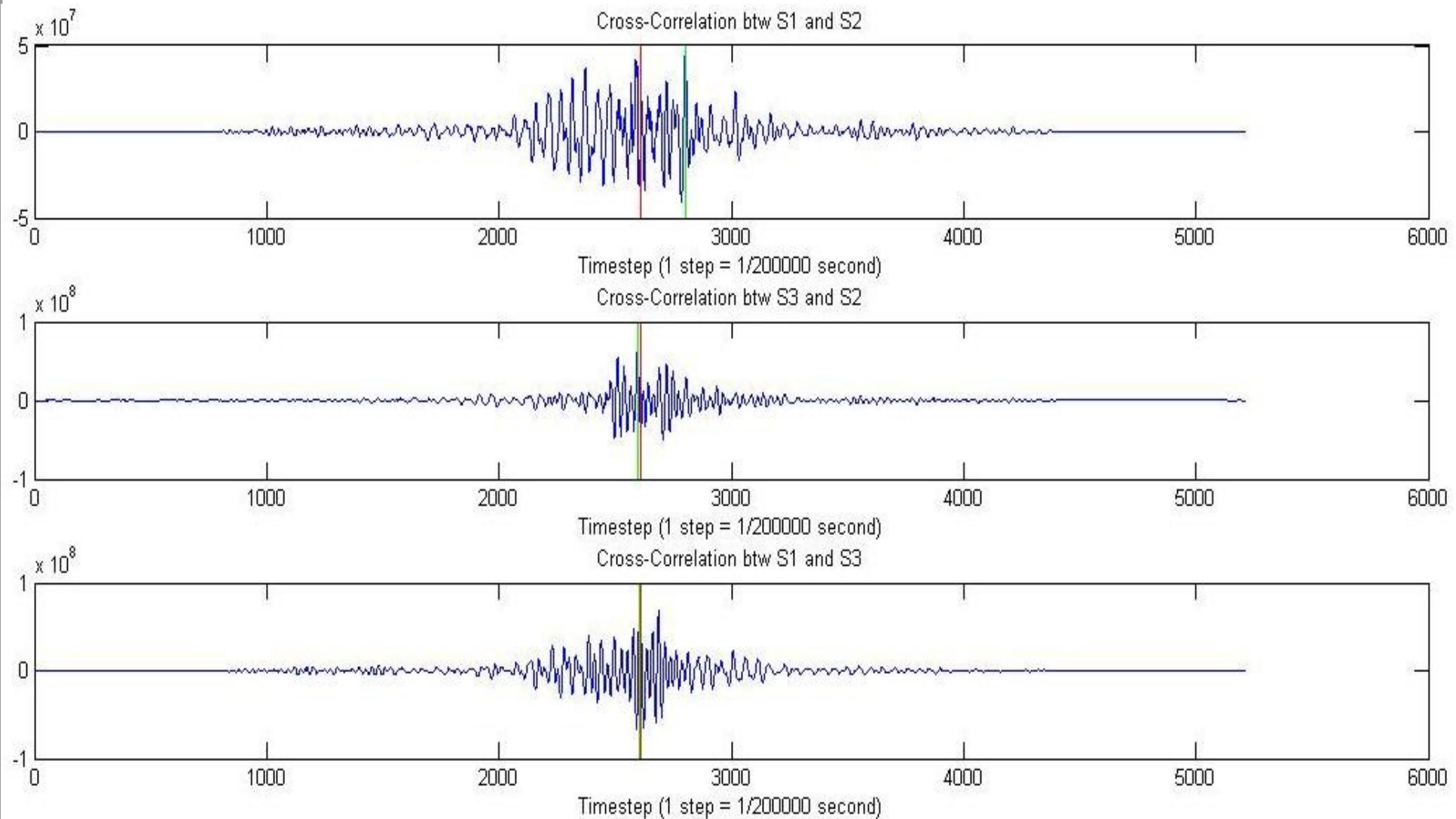
- Using Microphone
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  - Graphical solution
- **Experiment 2**
  - **Wave signals**
  - **Cross-correlation**
  - **Graphical solution**
- Questions



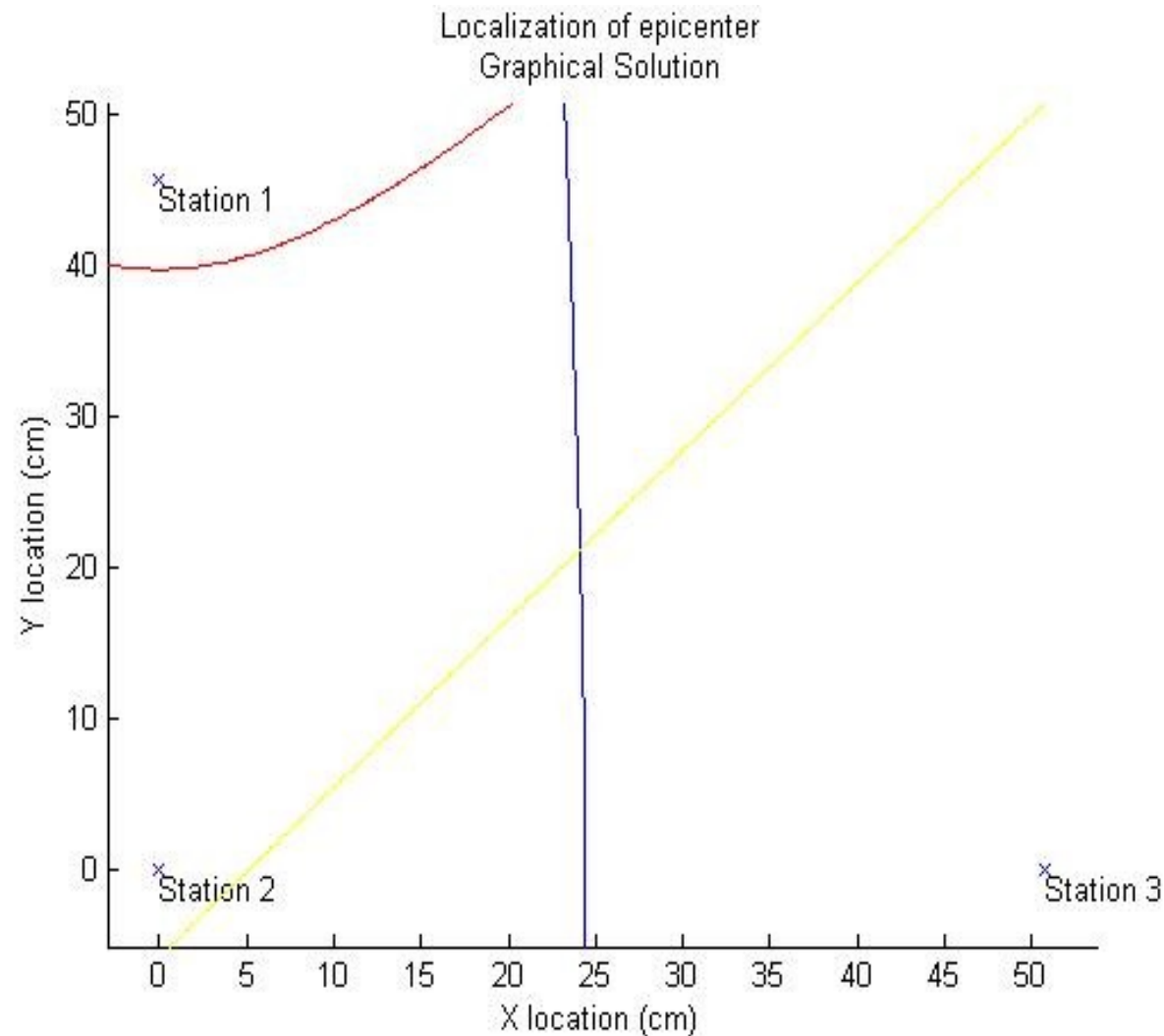
# Wave signals (2)



# Cross-Correlation (2)



# Graphical solution (2)



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- **Questions**

# Questions

