Sounds of Discovery
Creating an Exhibit for the Niels Bohr Library & Archives

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Process

- Research & Topic Selection
- Establishing a Target Audience
- Design & Construction
- Installation
- Outreach
Research & Topic Selection

Andrew Gemant

- Published research on viscoelasticity & fractional differentials
- Annual AIP Andrew Gemant Award
  - Cultural
  - Artistic
  - or Humanistic
Research & Topic Selection

Four main ideas

1. Evolution of Star Charts and Maps
2. Physics as an Artform
3. Ladies in the Laboratory?
4. Sound and Acoustics
Robert Shankland (1908-1982)

○ Specialized in
  ■ Acoustics
  ■ Atomic Physics
  ■ Nuclear Physics

○ Researched underwater sound during World War II
Research & Topic Selection

Marie Tharp (1920-2006)
- American geologist and oceanographic cartographer
- Worked with Bruce Heezen
- Created the first scientific map of the Atlantic Ocean floor
Frederick Hunt (1905-1972)
- Acoustic Engineer
- During WWII, invented new techniques for sonar and coined the name SONAR.
Establishing a Target Audience

- Employees housed in American Center of Physics
- Guests of the Niels Bohr Library & Archives
Design & Construction

● Learning styles
  ○ Visual
  ○ Listening
  ○ Kinesthetic

● Visualizing Sound
  ○ 3D Elements
  ○ Listening Aids

● Art Projects
  ○ Spectrogram
  ○ Ocean Floor
  ○ Bubble Painting
Prepping Mock Cases
Construction, Installation & Setbacks
Construction, Installation & Setbacks
Finished!
Finished!
Finished!
What is the worst sound you have ever heard?

Where have you experienced the best architectural acoustics? (concert halls, plays, etc)

On a post-it, draw the ocean floor.

Name a loud restaurant where you can’t hear your own dinner conversation.

Outreach

Visit the 3rd floor lobby to learn more about how sound has shaped our world.
Thank You

Society of Physics Students

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Questions?

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