

Sounds of Discovery

Creating an Exhibit for the Niels Bohr Library & Archives

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American Institute of Physics

Process

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

Research & Topic Selection

Andrew Gemant

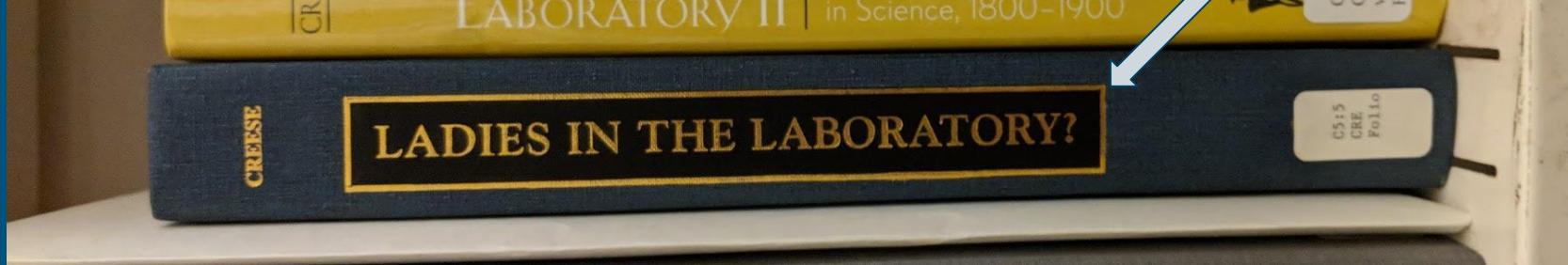
- Published research on viscoelasticity & fractional differentials
- Annual AIP Andrew Gemant Award
 - Cultural
 - Artistic
 - or Humanistic



Research & Topic Selection

Four main ideas

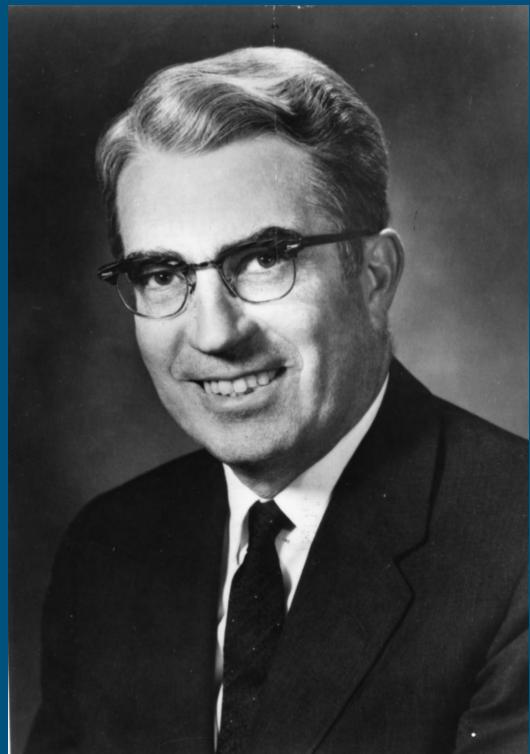
1. Evolution of Star Charts and Maps
2. Physics as an Artform
3. Ladies in the Laboratory?
4. **Sound and Acoustics**



Research & Topic Selection

Robert Shankland (1908-1982)

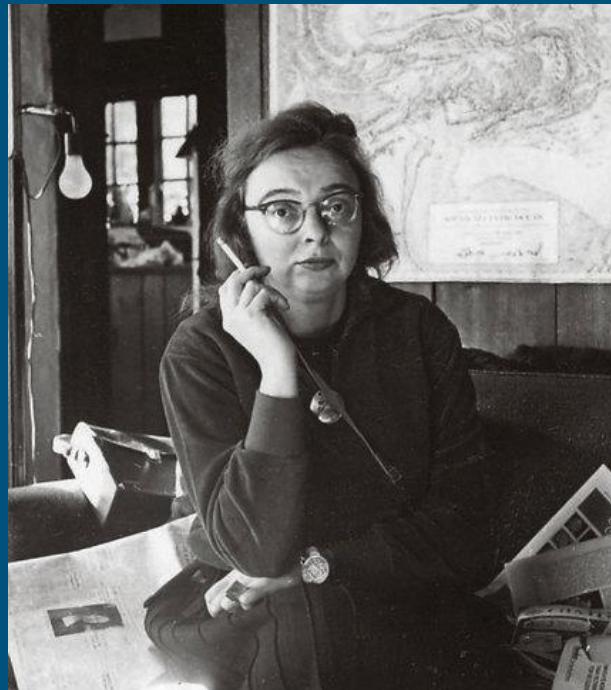
- Specialized in
 - Acoustics
 - Atomic Physics
 - Nuclear Physics
- Researched underwater sound during World War II



Research & Topic Selection

Marie Tharp (1920-2006)

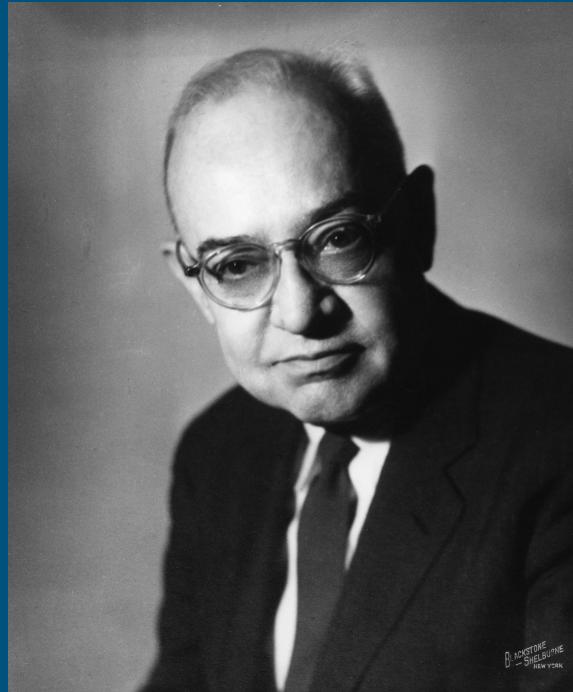
- American geologist and oceanographic cartographer
- Worked with Bruce Heezen
- Created the first scientific map of the Atlantic Ocean floor



Research & Topic Selection

Frederick Hunt (1905-1972)

- Acoustic Engineer
- During WWII, invented new techniques for sonar and coined the name SONAR.

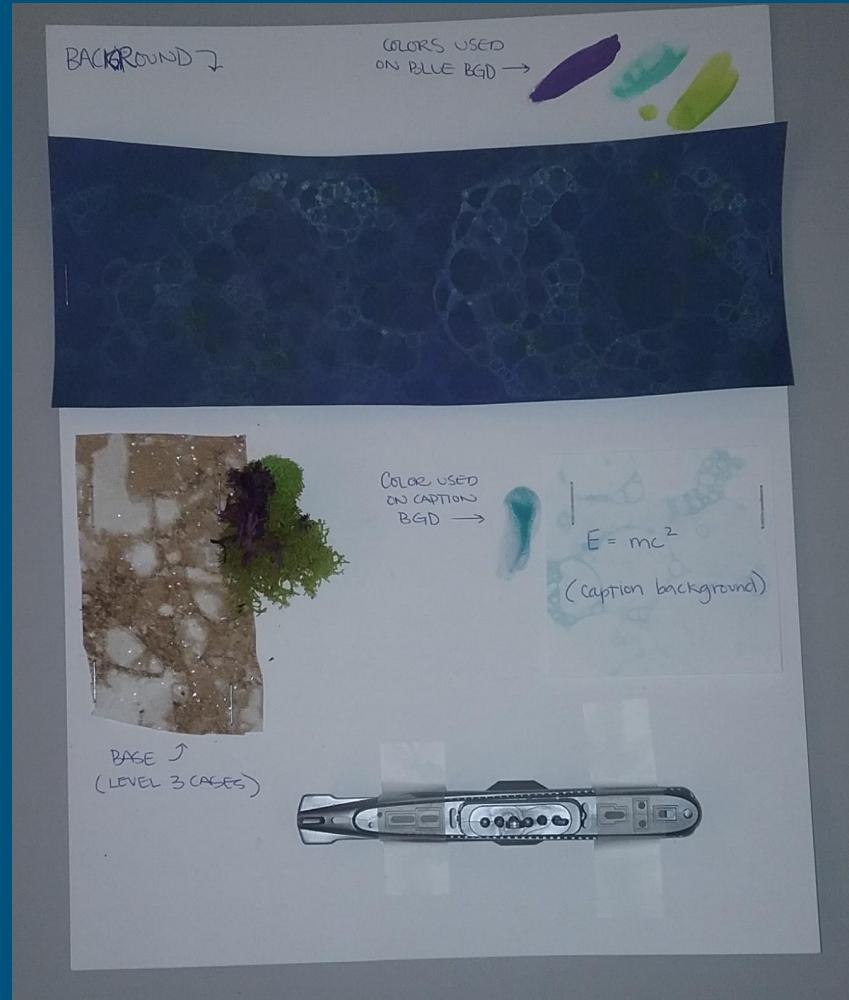


Establishing a Target Audience

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

Design & Construction

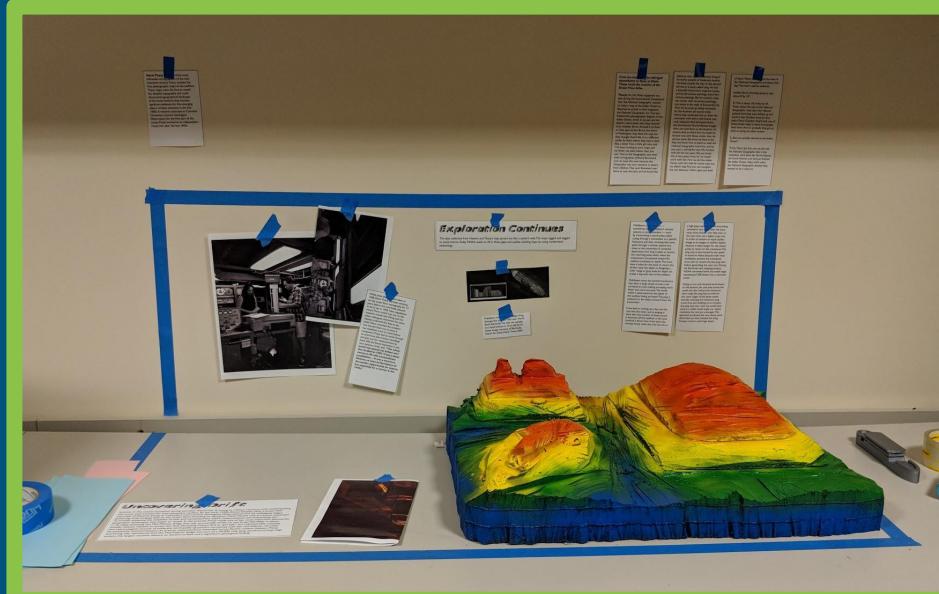
- Learning styles
 - Visual
 - Listening
 - Kinesthetic
- Visualizing Sound
 - 3D Elements
 - Listening Aids
- Art Projects
 - Spectrogram
 - Ocean Floor
 - Bubble Painting



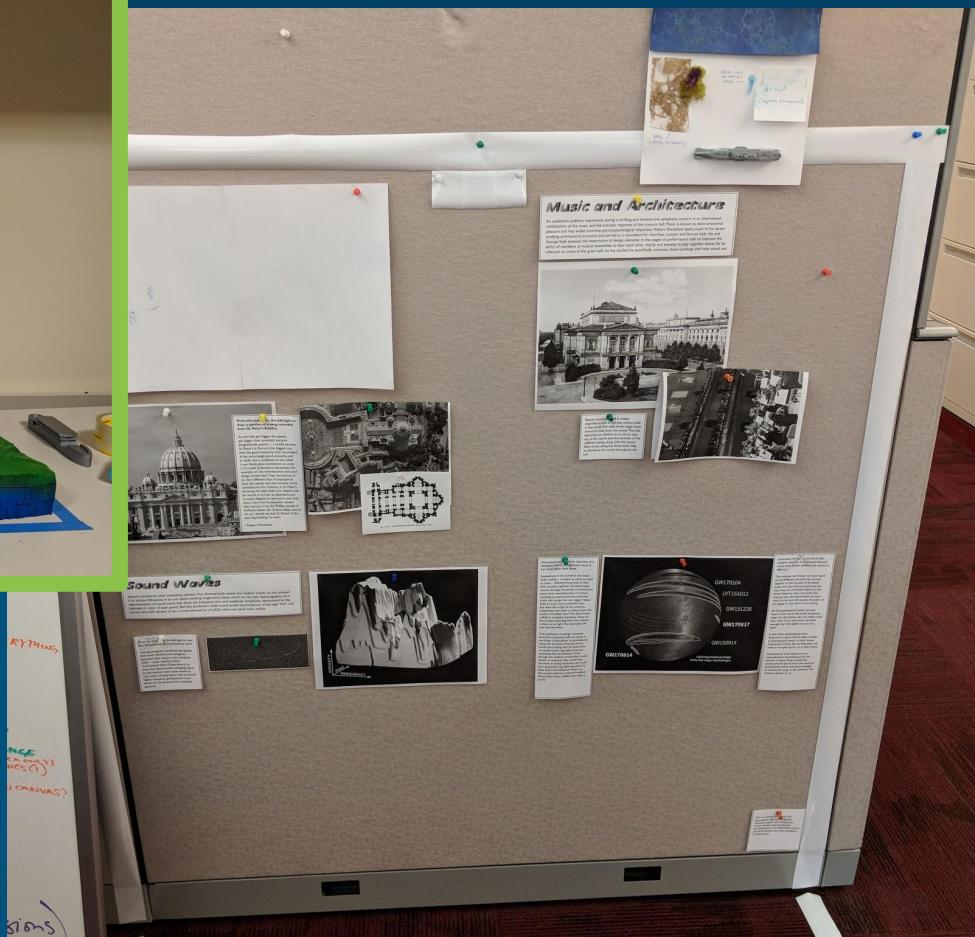








Prepping Mock Cases





Construction, Installation & Setbacks



Construction, Installation & Setbacks

Finished!



Finished!



Finished!



Outreach

What is the worst sound
you have ever heard?

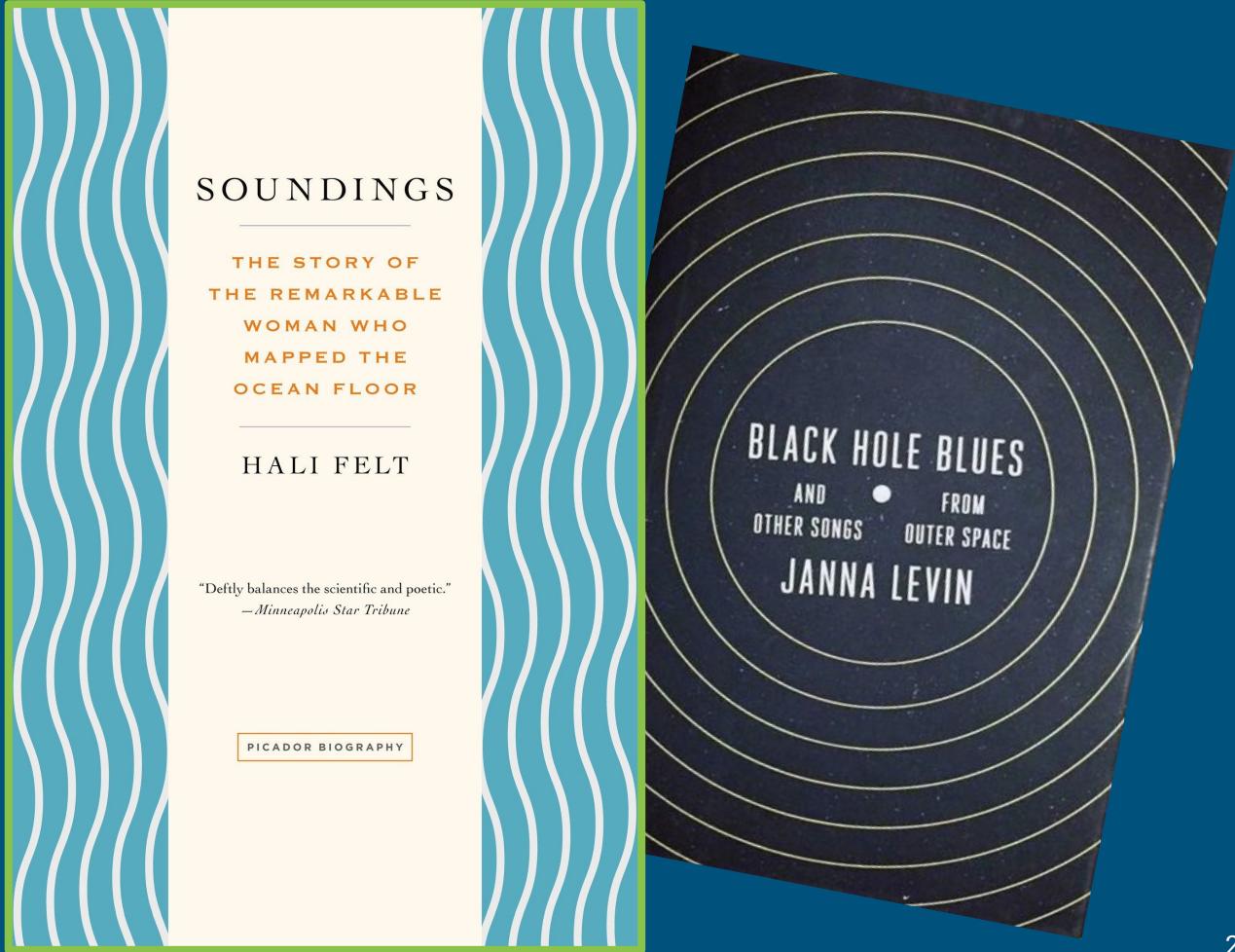
Visit the 3rd floor lobby to learn more about how sound has shaped our world.

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

On a post-it, draw the
ocean floor.

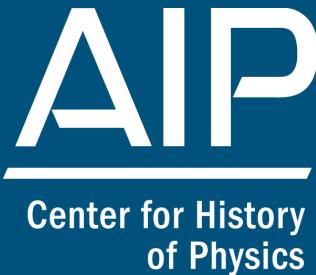
Name a loud restaurant
where you can't hear
your own dinner
conversation.

Outreach



Thank You

Society of Physics Students



Melanie Mueller

Amanda Nelson

Sarah Cochrane

Niels Bohr Library & Archives Staff

Brad Conrad

James Merrick

Michael Welter

Victor Garrett

Questions?

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