

CENTER FOR

ASTROPHYSICS

HARVARD & SMITHSONIAN

The LightSound Project

Experiencing Solar Eclipses through Sound

Dawn Davies

on behalf of The LightSound Project Team





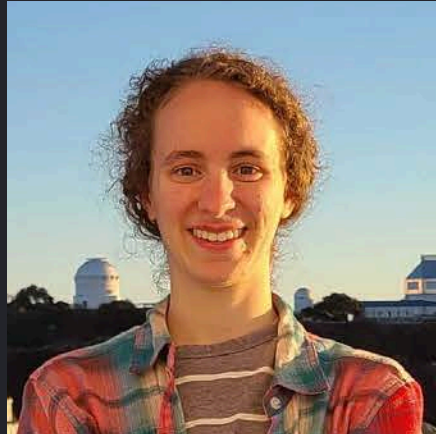
Who is LightSound?



Allyson Bieryla

Astronomer

Center for Astrophysics |
Harvard & Smithsonian



Sóley Hyman

Doctoral Student
Steward Observatory

Astronomy & Astrophysics
University of Arizona



Daniel Davis

Director of Lecture
Demonstrations

FAS Division of Science
Harvard University



**Wanda Diaz-
Merced**

Postdoctoral Fellow

International
Astronomical Union



Elliot Richards

Electronics Engineer
Civil Engineering

Center for Astrophysics |
Harvard & Smithsonian



What is LightSound?

A solar eclipse sonification device for the blind and low-vision

Open Source

- ✓ Instructions to build your own (*English, Español, and Français*)
- ✓ Software to collect and plot data
- ✓ 3D case designs

Wired

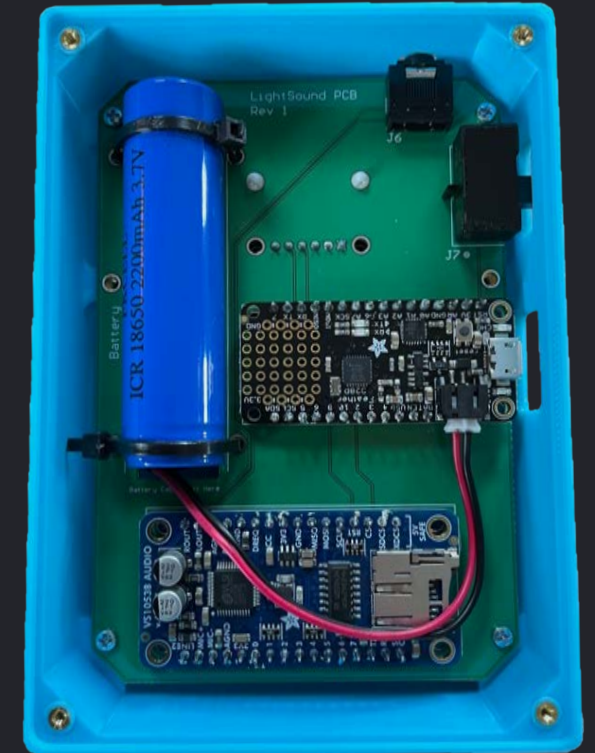
- 9-volt Battery
- Flora Microcontroller Board
- MIDI Board

PCB

- Li-Ion Rechargeable Battery
- Feather Board
- MIDI Board
- Micro-USB (Battery Charging & Data Collection)



Wired

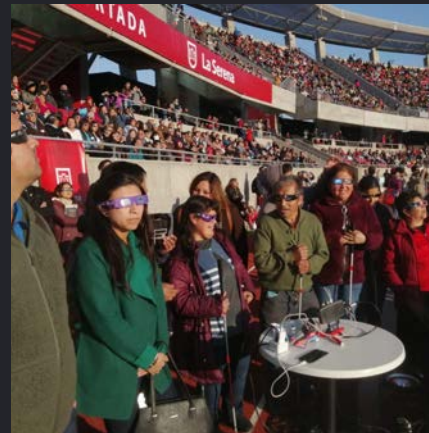


Printed Circuit Board (PCB)



Sonification

Video Credit: Paulina Toranzo Ibarren



Flute



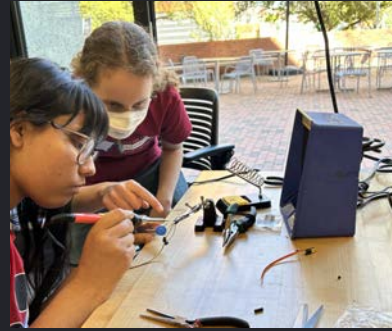
Clarinet



Clicks



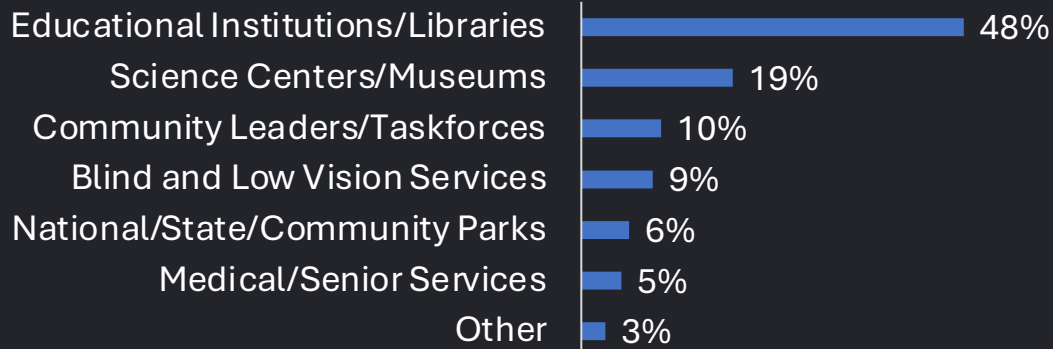
Workshops & Community Engagement



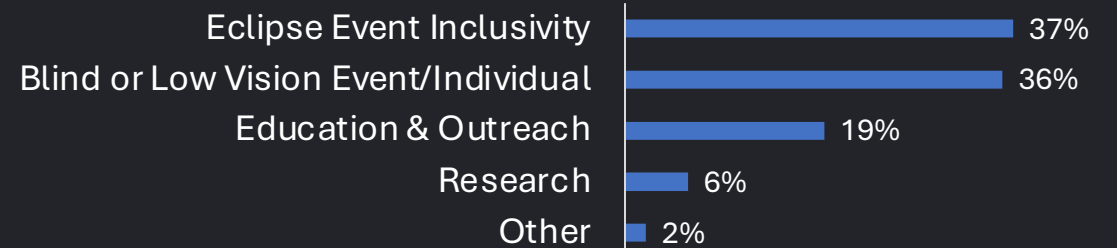
8 Workshops + 420 Volunteers = 900+ Devices Built

Rochester Museum of Science • University of Arizona • University of Texas at Austin • Harvard University
University of Texas at San Antonio • New England SciTech • Austin Nature and Science Center

Device Recipient Affiliation

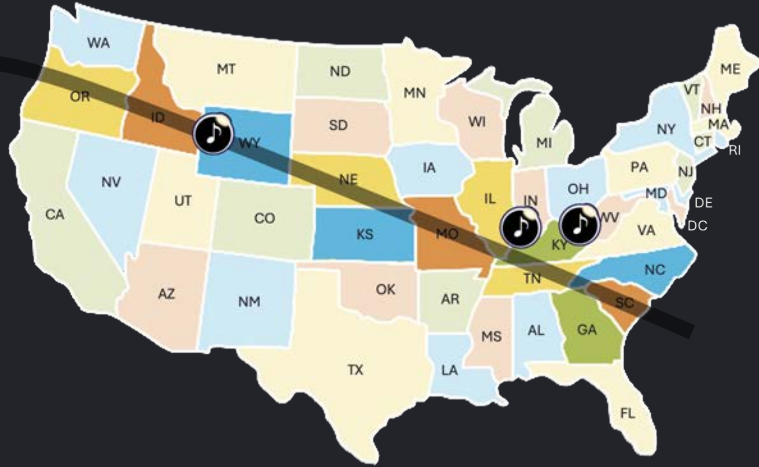


Device Purpose





The Past & Present of LightSound



August 21, 2017
Total Solar Eclipse



July 2, 2019

Total Solar Eclipse

December 14, 2020

Total Solar Eclipse



October 14, 2023

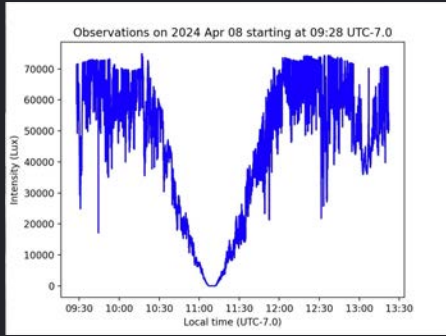
Annular Solar Eclipse

April 8, 2024

Total Solar Eclipse



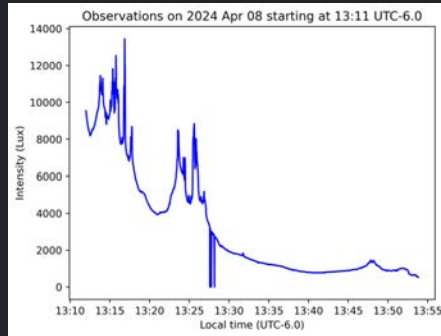
LightSound and the Data – April 8, 2024



72° Fahrenheit
69% Humidity
8mph Winds (W)
Mostly Cloudy

Mazatlán, Mexico (MST)

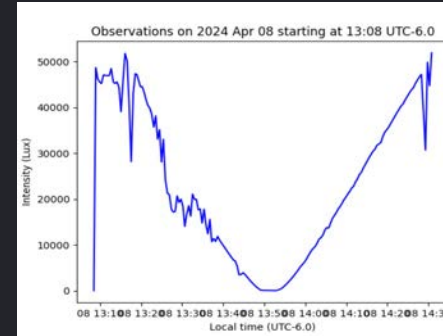
Totality 11:07 – 11:11



79° Fahrenheit
72% Humidity
7mph Winds (SSE)
Cloudy

Austin, Texas (CDT)

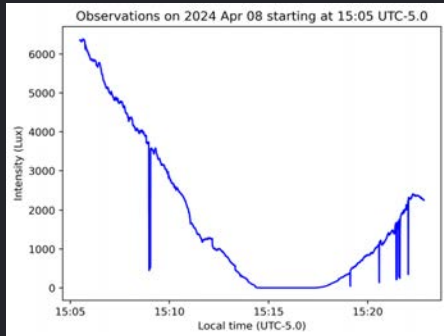
Totality 13:35 – 13:38



76° Fahrenheit
54% Humidity
5mph Winds (SSW)
Fair

Hot Springs, Arkansas (CDT)

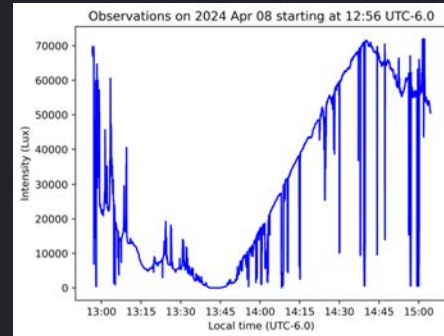
Totality 13:49 – 13:53



67° Fahrenheit
49% Humidity
7mph Winds (WSW)
Mostly Cloudy

Kent, Ohio (EDT)

Totality 15:14 – 15:17



60° Fahrenheit
33% Humidity
6mph Winds (ESE)
Mostly Cloudy

Buffalo, New York (EDT)

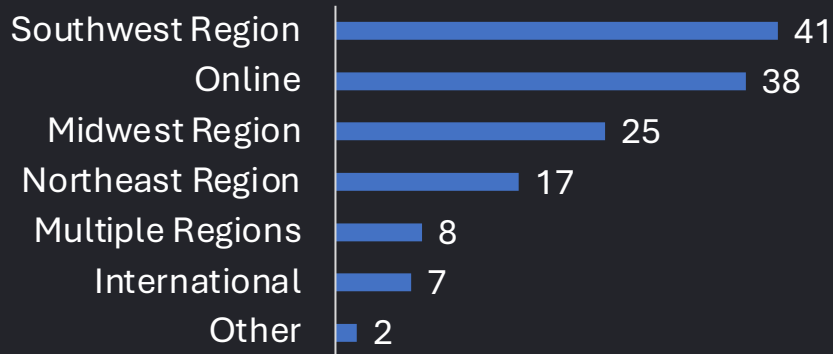
Totality 15:18 – 15:22



LightSound and the Media

Articles/Interviews & Press

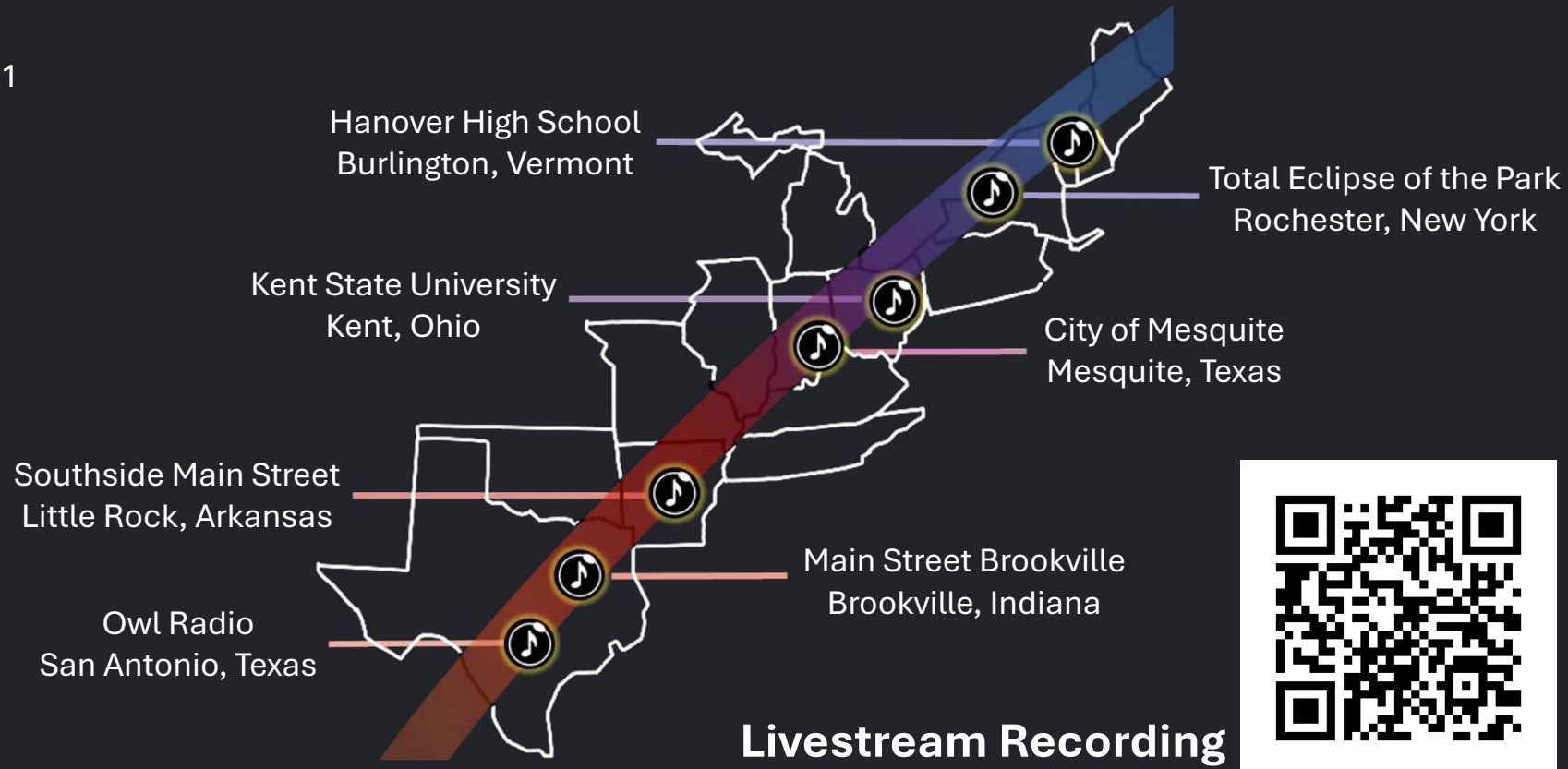
Print & Online



- KUTX News – Morning Edition
- National Geographic
- ABC 7 Chicago, Illinois
- WRVO NPR Oswego, New York
- WBFO Buffalo and Toronto Public Media
- City News Ottawa, Canada
- San Juan Daily Star, Puerto Rico

American Council of the Blind and ACB Media

Live Stream of Totality



Livestream Recording

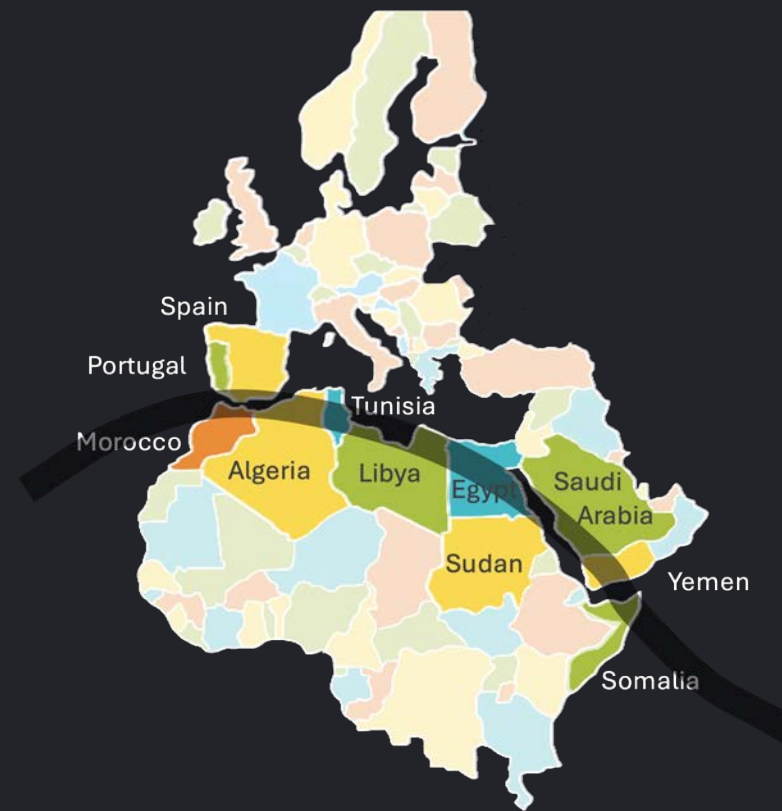




The Future of LightSound



August 12, 2026
Total Solar Eclipse



August 2, 2027
Total Solar Eclipse



Host a Future
LightSound Workshop



Request a LightSound
Device



The LightSound Project: Eclipse Sonification



<http://astrolab.fas.harvard.edu/LightSound.html>

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