



Blinky Lights: Origins & Lessons

Paul Doherty Memorial Speaker Series

Bree Barnett Dreyfuss

Amador Valley High School • NCNAAPT

Teacher Institute, Exploratorium • Blog of Phyz

Tinyurl.com/BarnettDreyfuss
[@BarnettDreyfuss](https://twitter.com/BarnettDreyfuss)







Paul Doherty→

<http://scienceformonks.org/about/>



“I needed a flashlight...”

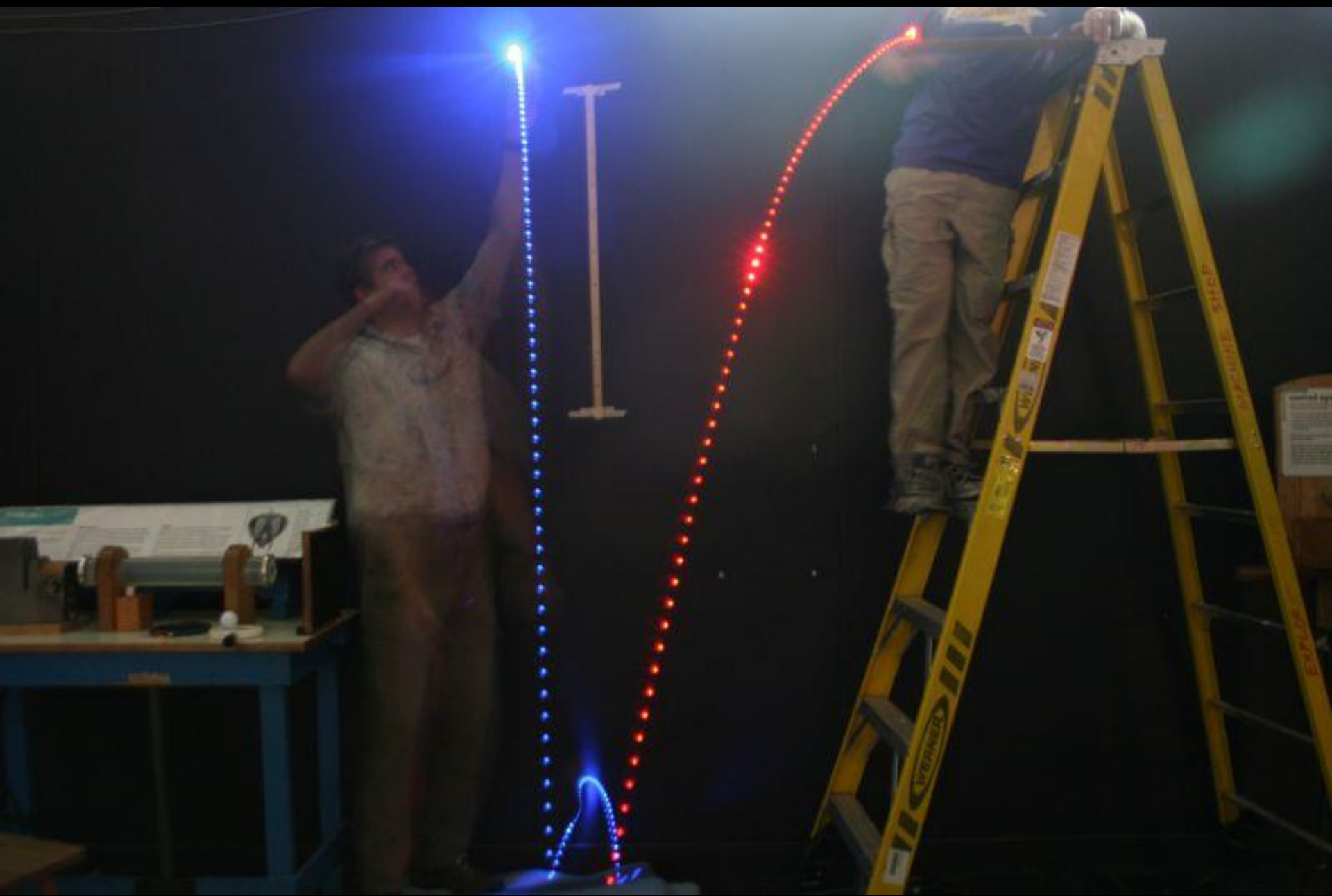
Fluke discovery of “Blinky Lights” (old Inova Microlights)

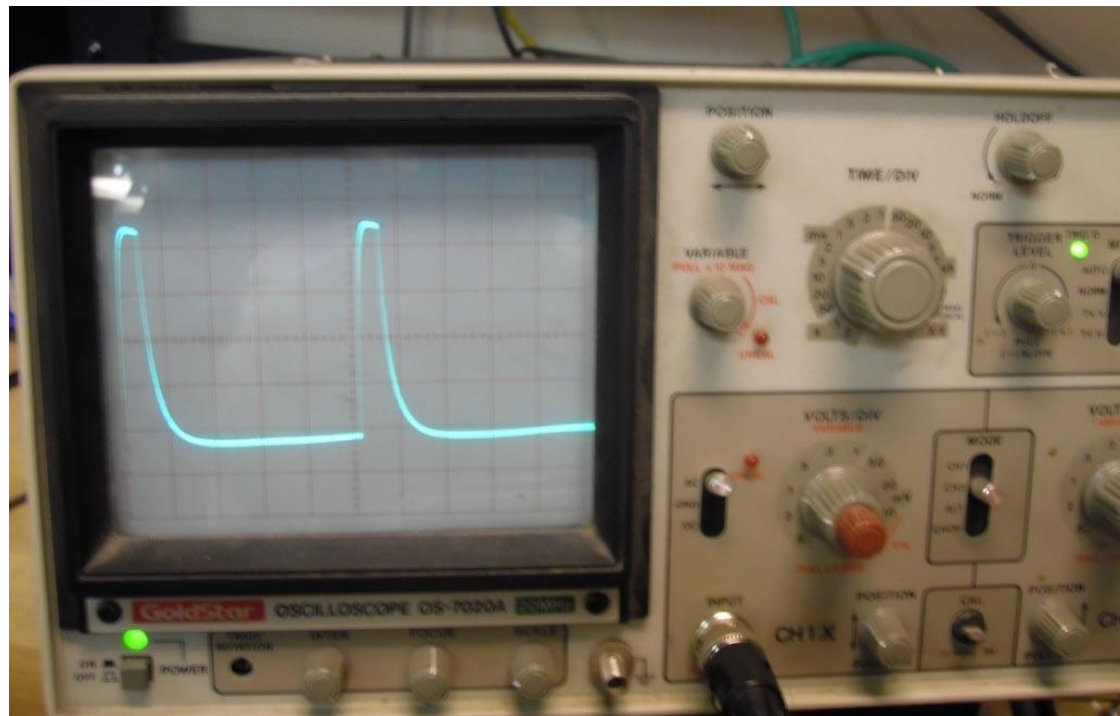
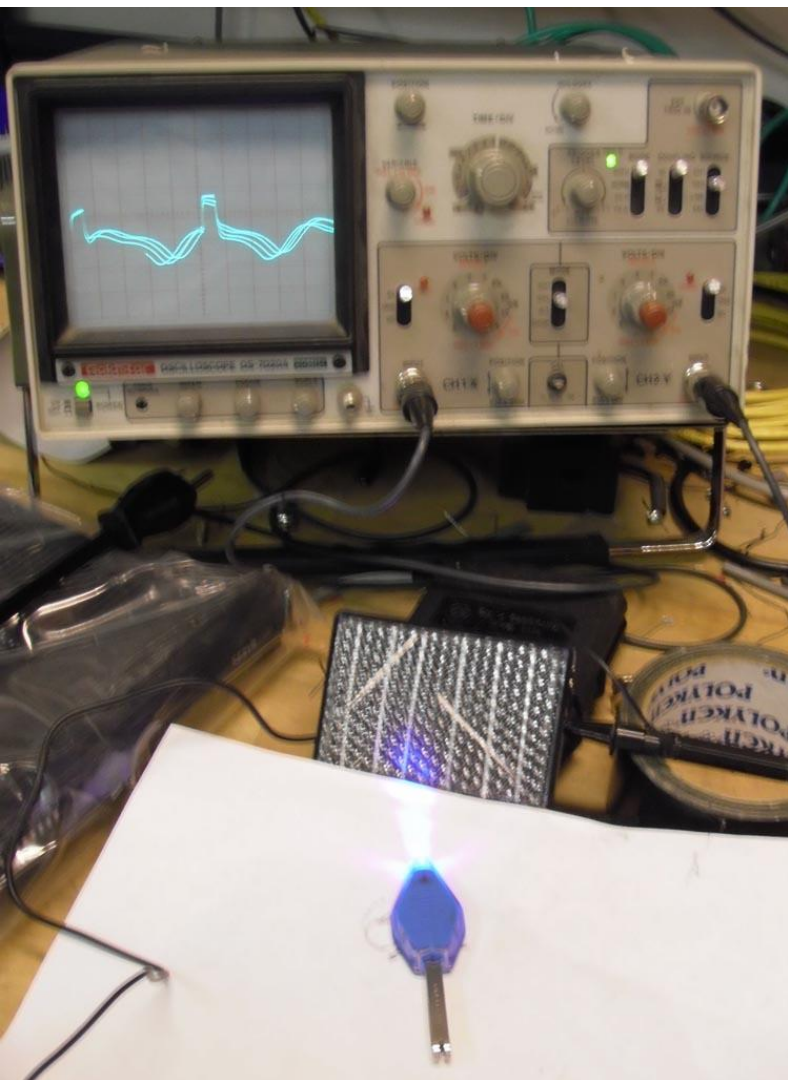




First workshop I attended with Blinky Lights was about science & art. Qualitative things we tried:

- Capturing types of motion
- Writing words
- Drawing pictures, etc.





Images from Paul's first experiment to find the blink rate of the lights using a solar cell & oscilloscope.



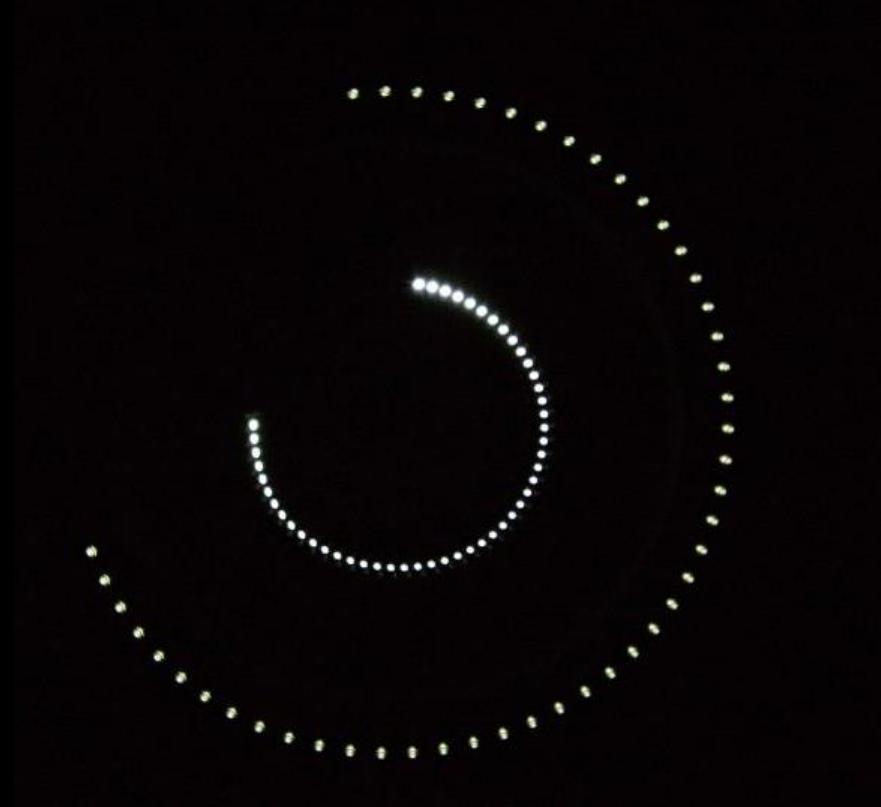
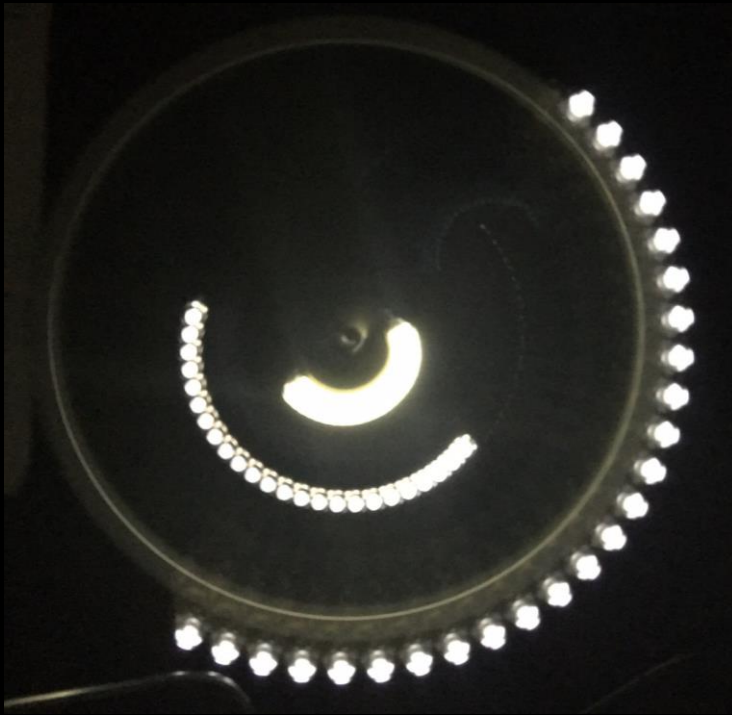
He also used a solar cell to cheap speaker with free audio program Audacity

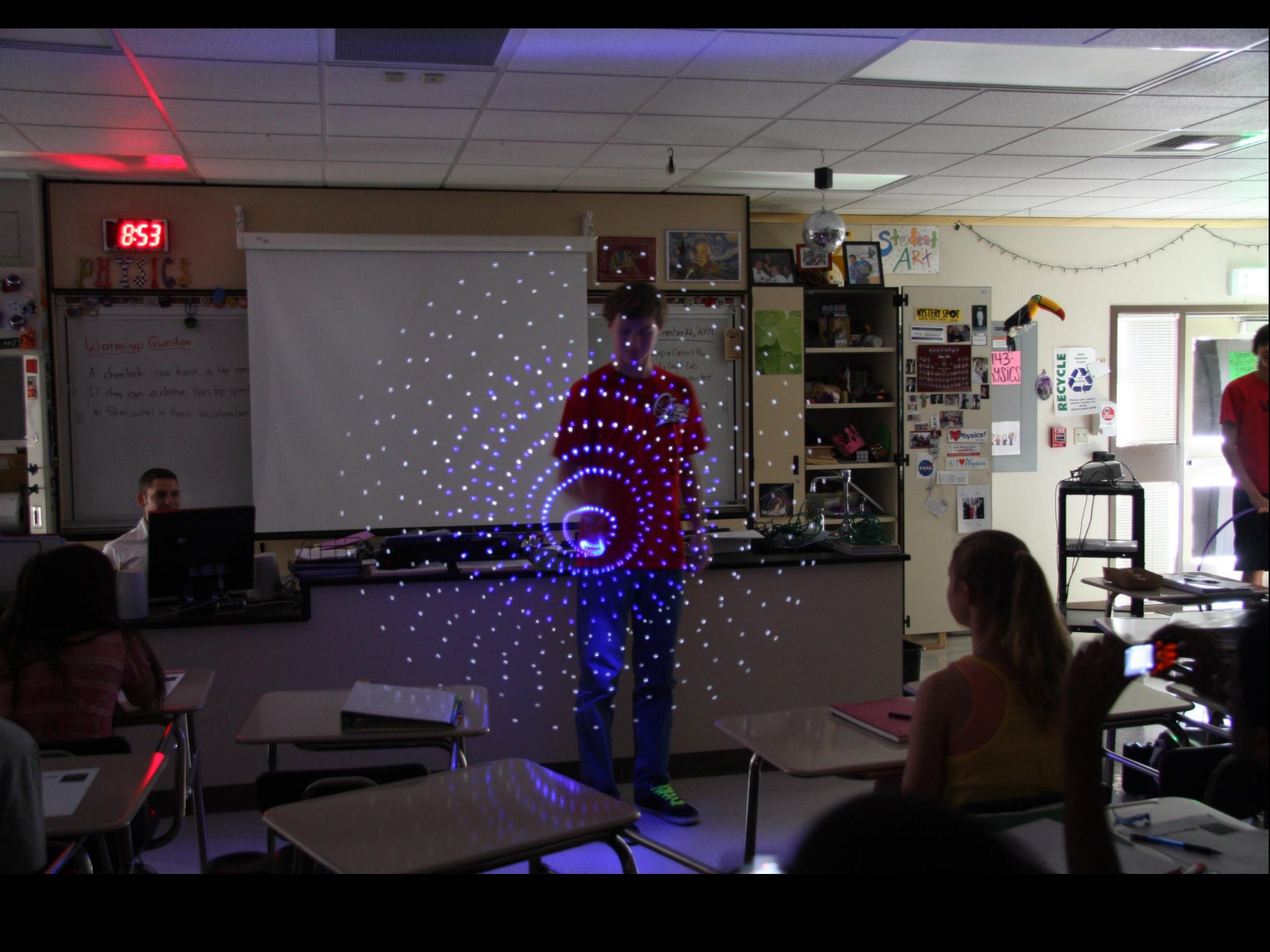


New Blinky Lights
being made by
Pacific Antenna
for *specific*
frequencies made
for this purpose!

<http://www.qrpkits.com/>

Blinky lights at different radii on the same bike wheel show their different tangential velocities.





8:53

PHYSICS

Warm-up Question

A cheetah can have a top speed of 30 m/s. If they can achieve this top speed in 3.5 s, what is their acceleration?

Student Art

MYSTERY SPOT

143 PHYSICS

RECYCLE



IF IT STAYS
IN THE GROUND
IF IT MOVES
IT'S A
AND IF IT
DOESN'T WORK
IN PHYSICS

WHEN IN
DOUBT
Ask Your Instructor!

WARNING:
DUE DATES
ARE CLOSER
THAN THE
APPEARANCE

U TURN
IN HOMEWORK
U GET
BETTER GRADES

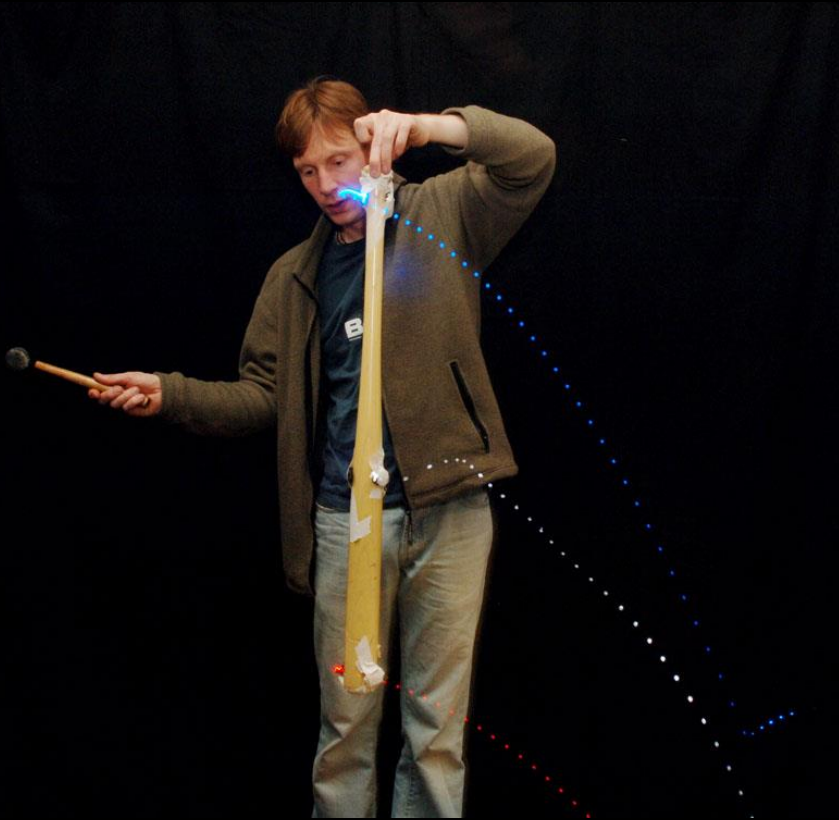


**TURN IT
OFF**

**NO
NAME**
PRO TO BESS

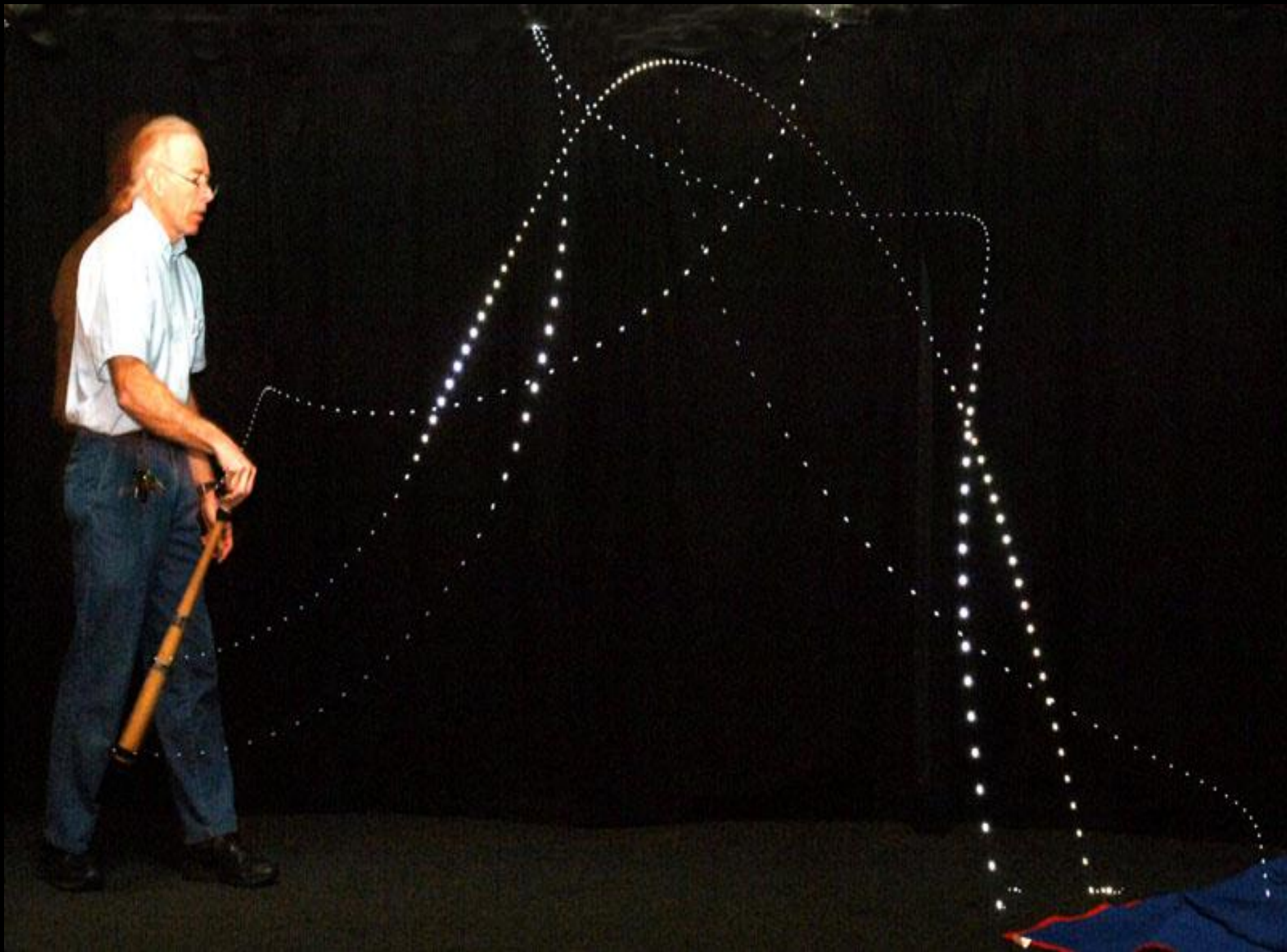
Sebastian Martin, *Exploratorium*

Bat hit @ CoM



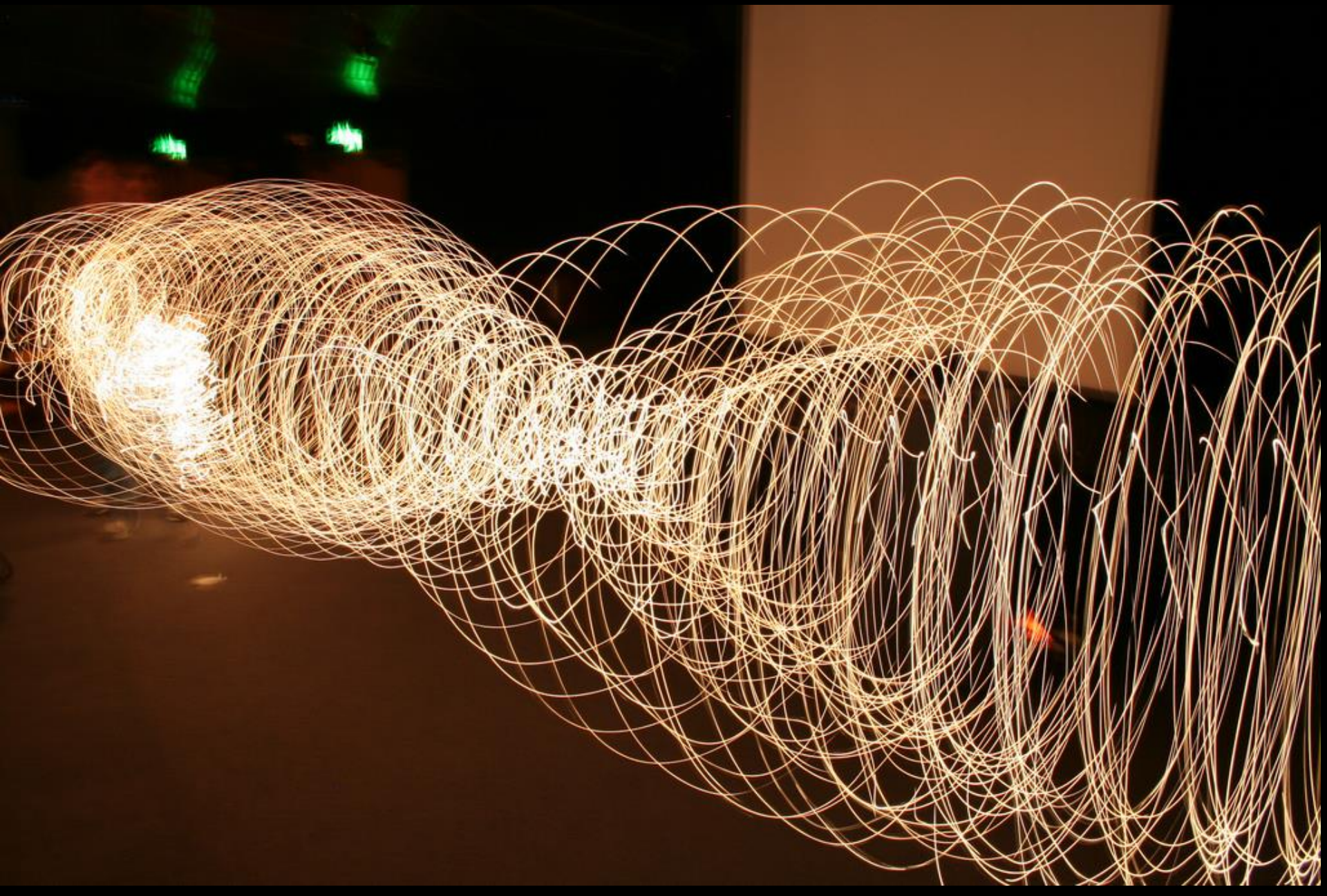
Bat hit below CoM





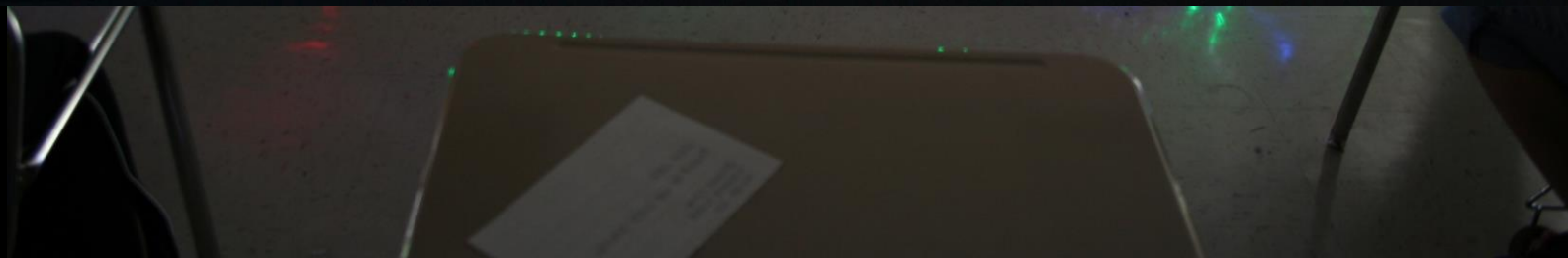


“Go ahead, give it a spin...”











Its ok to be wrong and its great not to know everything.



Continuing Paul's legacy:

- Have fun with science and teach someone else to have fun with science
- Use one of his activities:
<http://www.exo.net/~pauld/> or an Exploratorium Snack
<https://www.exploratorium.edu/snacks>
- Admit you don't know everything and still be excited to learn along with your students.