

# WEBB'S MICROSHUTTERS

NASA's James Webb Space Telescope's microshutter array will be the first in space! This device works with high-resolution instruments on the observatory to study stars and galaxies. How do they work? What do they do?



Webb telescope



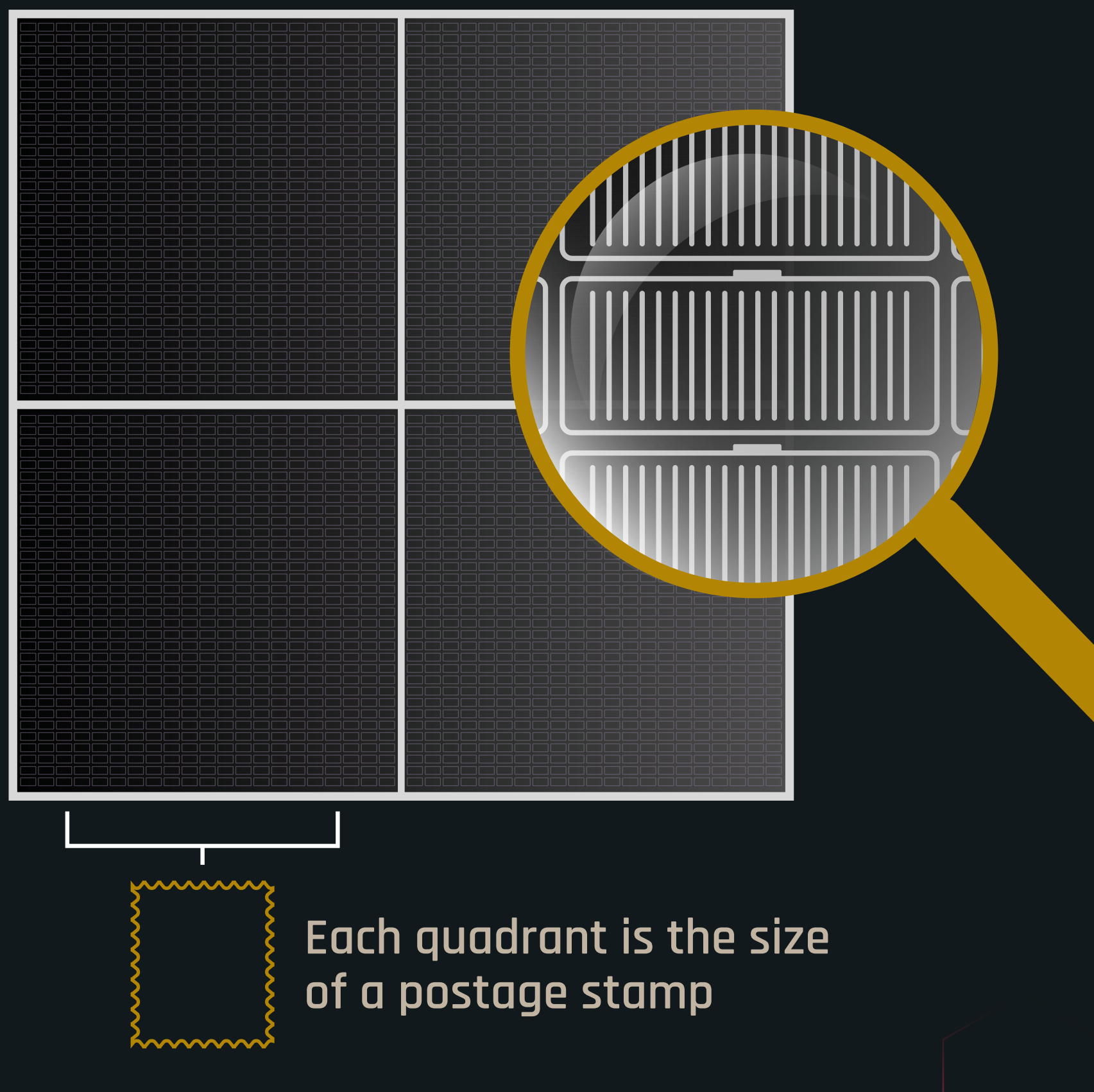
First microshutter array in space

Studies more stars and galaxies

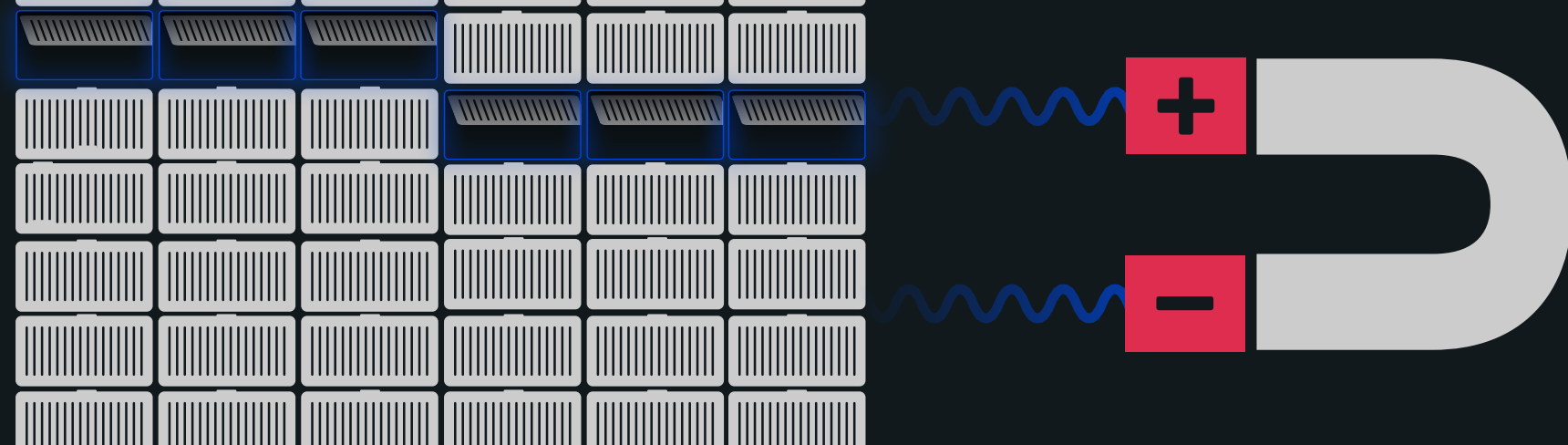
1 observation = > 100 spectra

## So Many, So Small

**62,000** microshutters **x 4** quadrants  
**= 248,000** microshutters



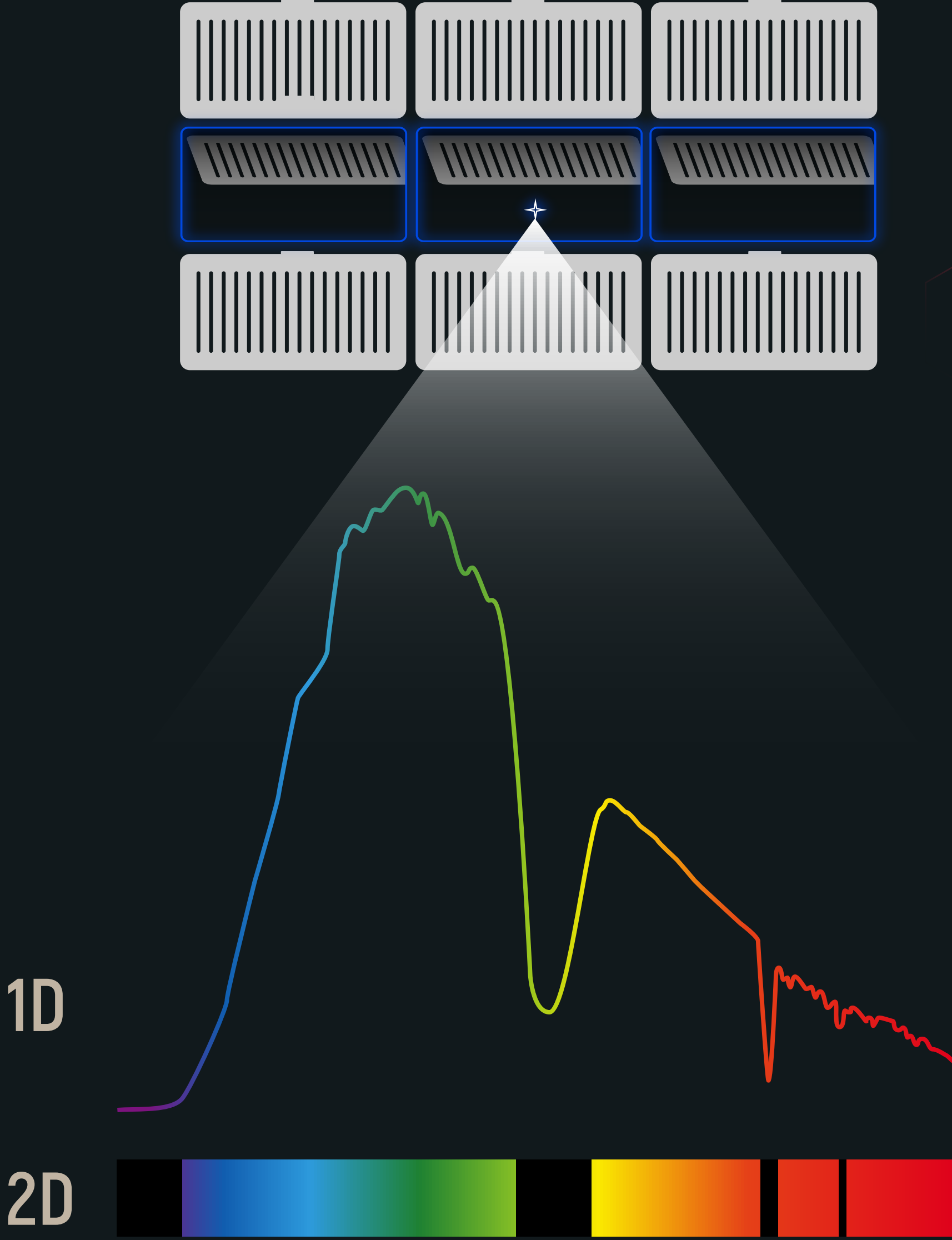
## How It Works



Magnets selectively open tiny doors all across the array, allowing the telescope's instruments to capture light (as **spectra**) from up to 100 celestial objects simultaneously.

## Splitting Light

Instruments behind Webb's microshutters spread light into colorful spectra, which help researchers learn about distant stars and galaxies.



## What We Learn From Spectra



COLOR



TEMPERATURE



COMPOSITION



MOTION



MASS