

ANCIENT LIGHT



CELESTIAL PHOTOGRAPHY BY MARSHA WILCOX
JANUARY 12 - MARCH 22 IN THE ALLIE KUSSIN GALLERY

EDUCATION PAMPHLET



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Mass
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ANCIENT LIGHT

MARSHA WILCOX

A photographic artist specializing in astrophotography, **Marsha Wilcox** is captivated by the wonder of ancient light from incomprehensibly old, distant, and vast nebulae and galaxies in the night sky. For her, experiencing the cosmos creates, “a connection to the infinite and timeless creator.” Her work is exhibited in museums and galleries, as well as held in private collections around the country.



“My photographic practice brings me to things invisible to the naked eye - vast and breathtakingly beautiful. A reminder that we are all connected to something infinitely larger than ourselves.”



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VOCABULARY

NEBULAE



Colorful, radiant interstellar clouds of gas and dust home to star birth. Within our galaxy they emit, reflect, and extinguish light.

GALAXIES



Systems of millions or billions of stars, gas and dust, held together by gravity's pull.

BONUS: COSMIC WEB

A network of luminous gases or other material connecting galaxies throughout the universe. In these threadlike networks, galaxies are bound to each other.



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INTRODUCTION TO LIGHT

The light in these images is ancient, traveling for hundreds or thousands of years to reach earth.



↖ The Pleiades are about 450 lightyears away, so the light we see from them at night is about 450 years old. This light left the Pleiades around 1575 (during the time The Americas were being colonized by the Europeans) and traveled through our galaxy to Marsha's telescope.



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THE SPEED OF LIGHT

It takes light...

- 1 second to travel around the equator $7\frac{1}{2}$ times
- 1.3 seconds to reach Earth from the Moon
- 8 minutes to reach Earth from the Sun



In the time it takes you to blink, light travels from Boston to San Francisco and back 3 times!



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PROCESS

On clear, calm nights when the moon is dim, Marsha wheels her telescope out to capture the universe. Using the telescope as a lense with dedicated astronomy cameras and specialized filters, she collects the ancient light of celestial objects invisible to the naked eye. **It is unimaginable how old, distant, and vast these ancient wonders are.**

Long exposure photography is the only way to experience these inspiring celestial scenes. Each final photograph is constructed from individual images captured over many hours. It's not unusual for the final photograph to contain 100 or more frames.

These images demonstrate...

“THERE IS ART IN THE SCIENCE, AND SCIENCE IN THE ART”

[Watch a video of Marsha's process:](#)



[Read an article about Marsha:](#)



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REFLECTION

- After seeing how grand and vast the universe is, how do you feel connected to it?
- Would you like to travel in space? What would you like to see?

ACTIVITIES

- Choose one of the celestial scenes in the gallery and give it a 'common name' based on what it looks like.
- Can you find a nebula, a galaxy, and a cosmic web in the gallery?



Check out planetarium app **Stellarium** to identify stars, planets, and constellations in the night sky above you!



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