

# Night Photography



F4, 30 secs. ISO 800



F4.5, 25 secs. ISO 3200

## Why shoot at night?

It's beautiful

Strange things happen with light and color

Fewer people





F4, 30 secs. ISO 800

## Equipment

- Tripod
- Fast lens (f4, f2.8, f2 or lower)
- Remote shutter release (or timer)
- Flashlight for light painting
- Red light for seeing





## Camera Settings

- RAW. Editing is essential to get the most from your pictures.
- Mode: Manual
  - Aperture Priority will work for bright scenes
  - Bulb for long exposures ( > 30 secs.)
- Exposure
  - ISO at lowest setting possible - 100-6400.
  - Aperture: Usually lowest f-stop
  - Shutter Speed: Varies
  - Trial and error

## Focusing

Autofocus works well in brightly lit scenes. However, it may not work well in low light because it can't "see" a defined edge to focus on.

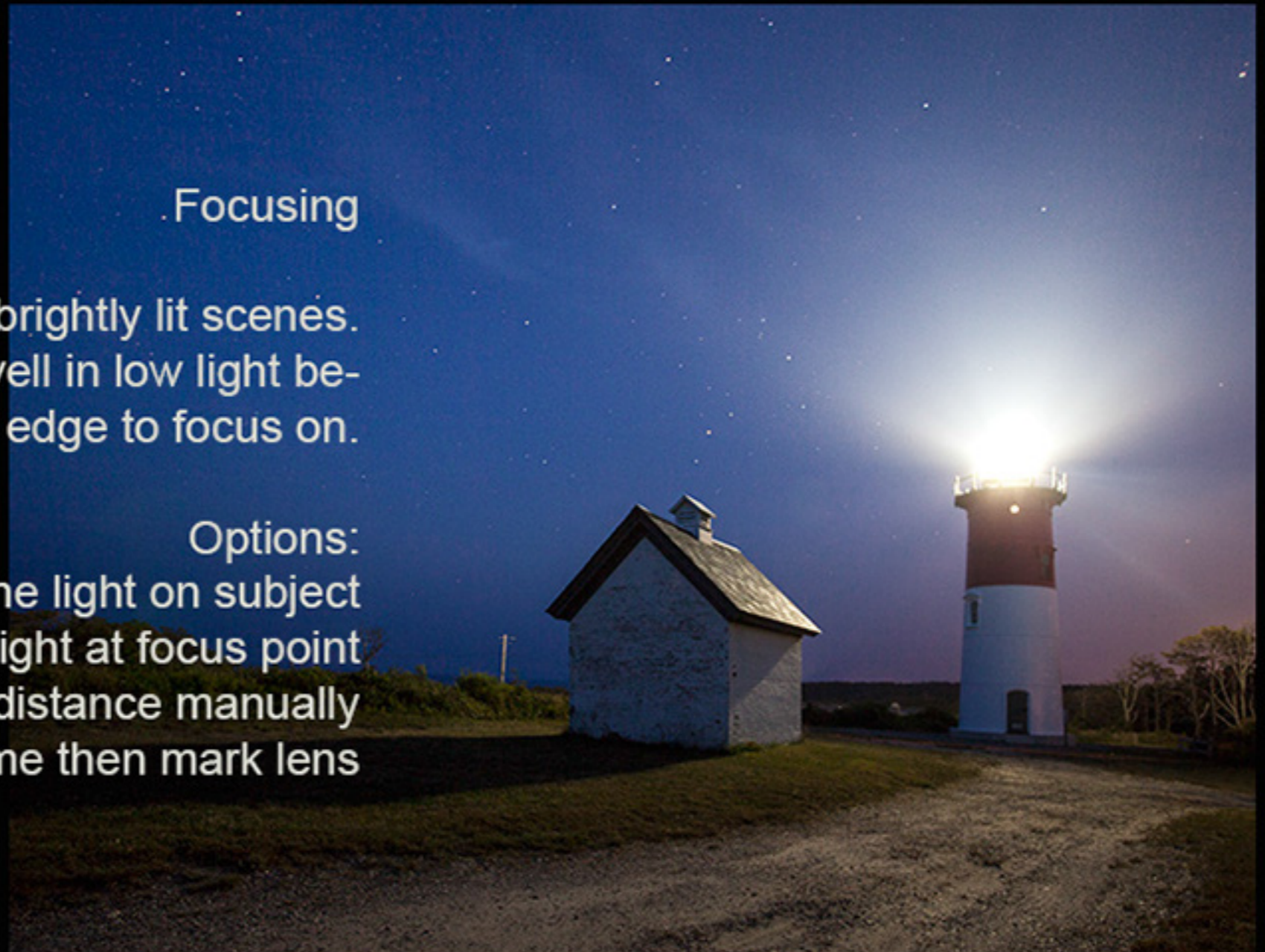
### Options:

Use flash light to shine light on subject

Place flashlight at focus point

Set hyperfocal distance manually

Focus on infinity during daytime then mark lens



F4.5, 30 secs., ISO 400



# FOCUSING OPTIONS

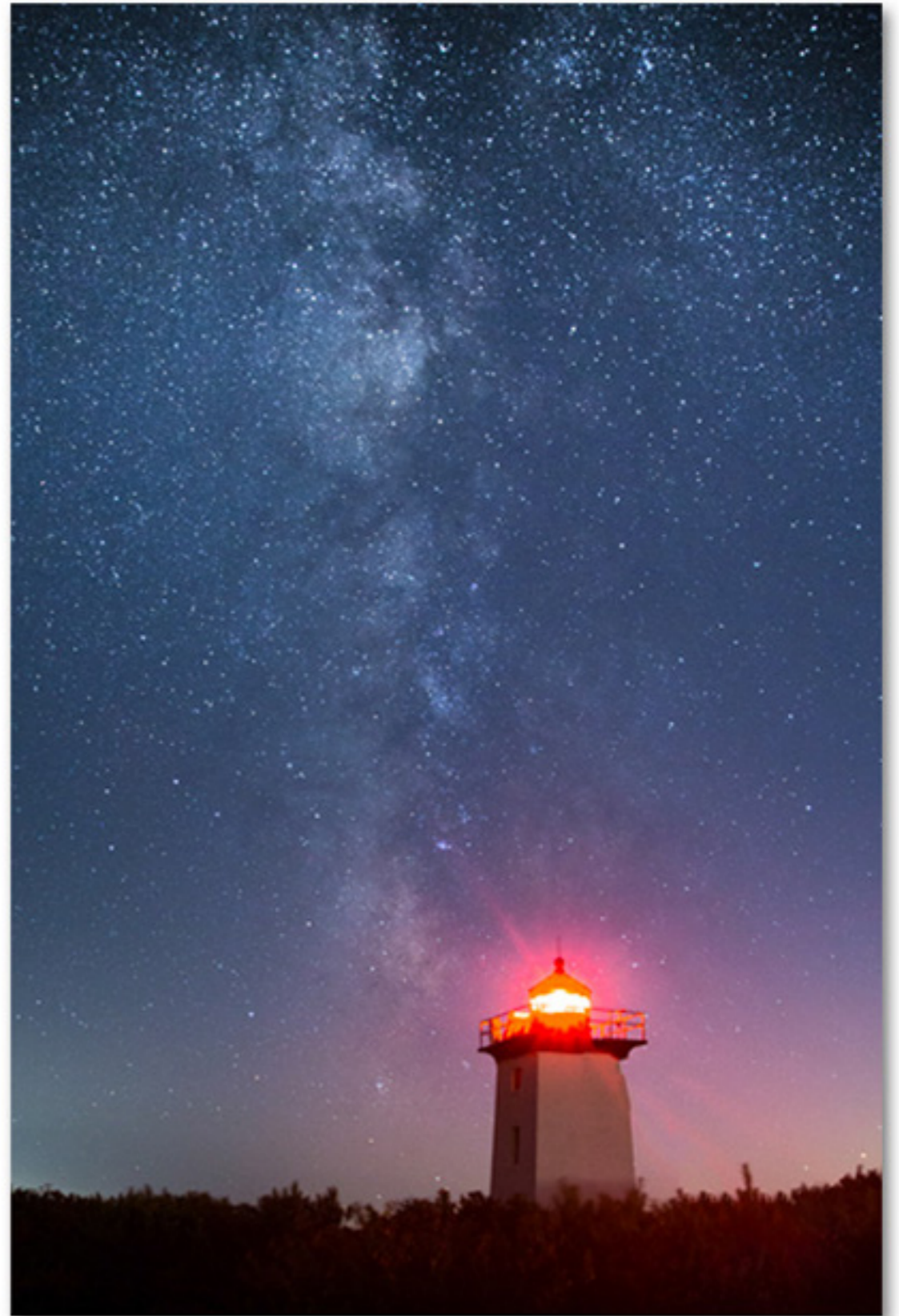
Autofocus



# FOCUSING OPTIONS

Autofocus

Autofocus with backbutton focusing,  
then recompose



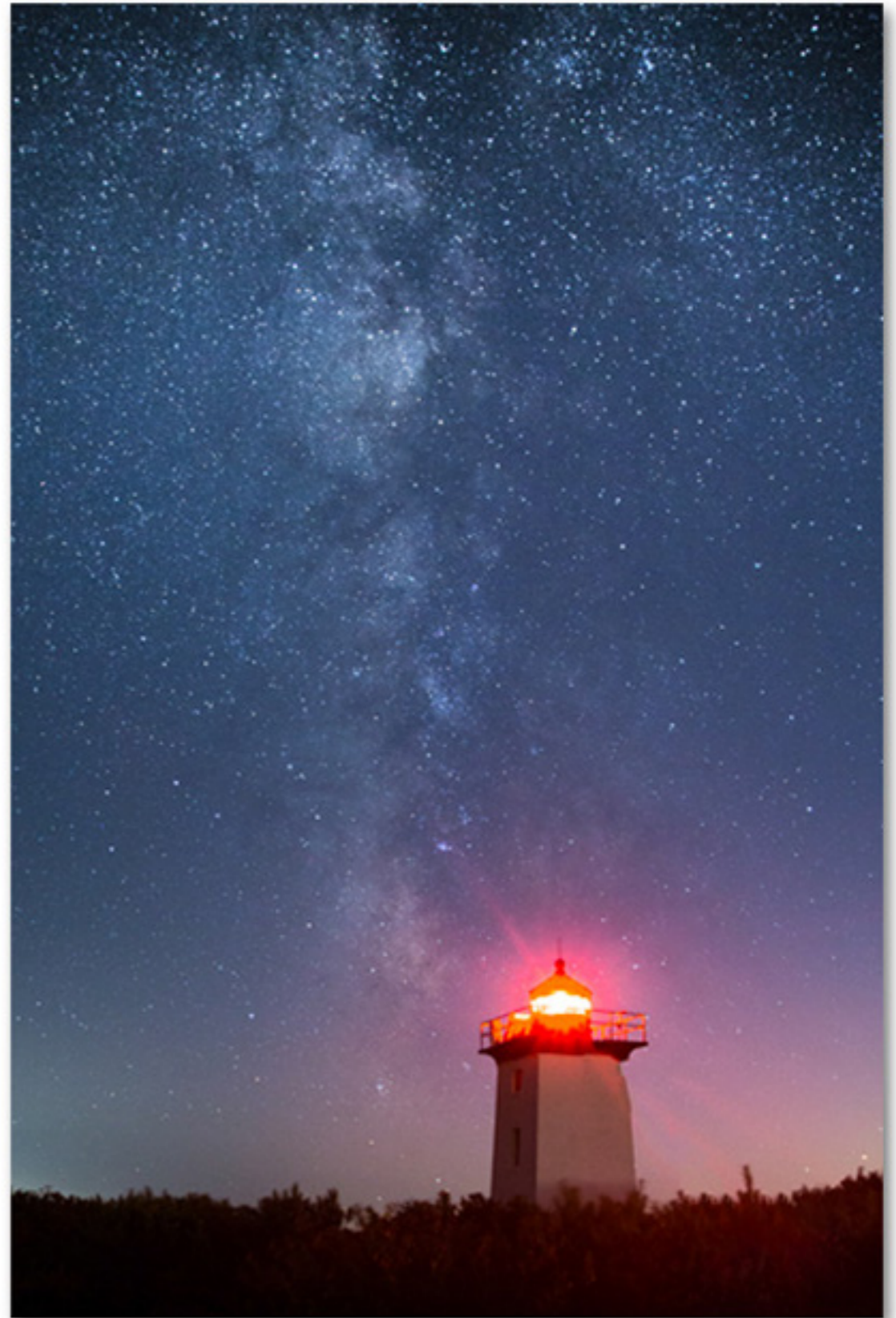


# FOCUSING OPTIONS

Autofocus

Autofocus with backbutton focusing,  
then recompose

Autofocus with focus lock, then recompose





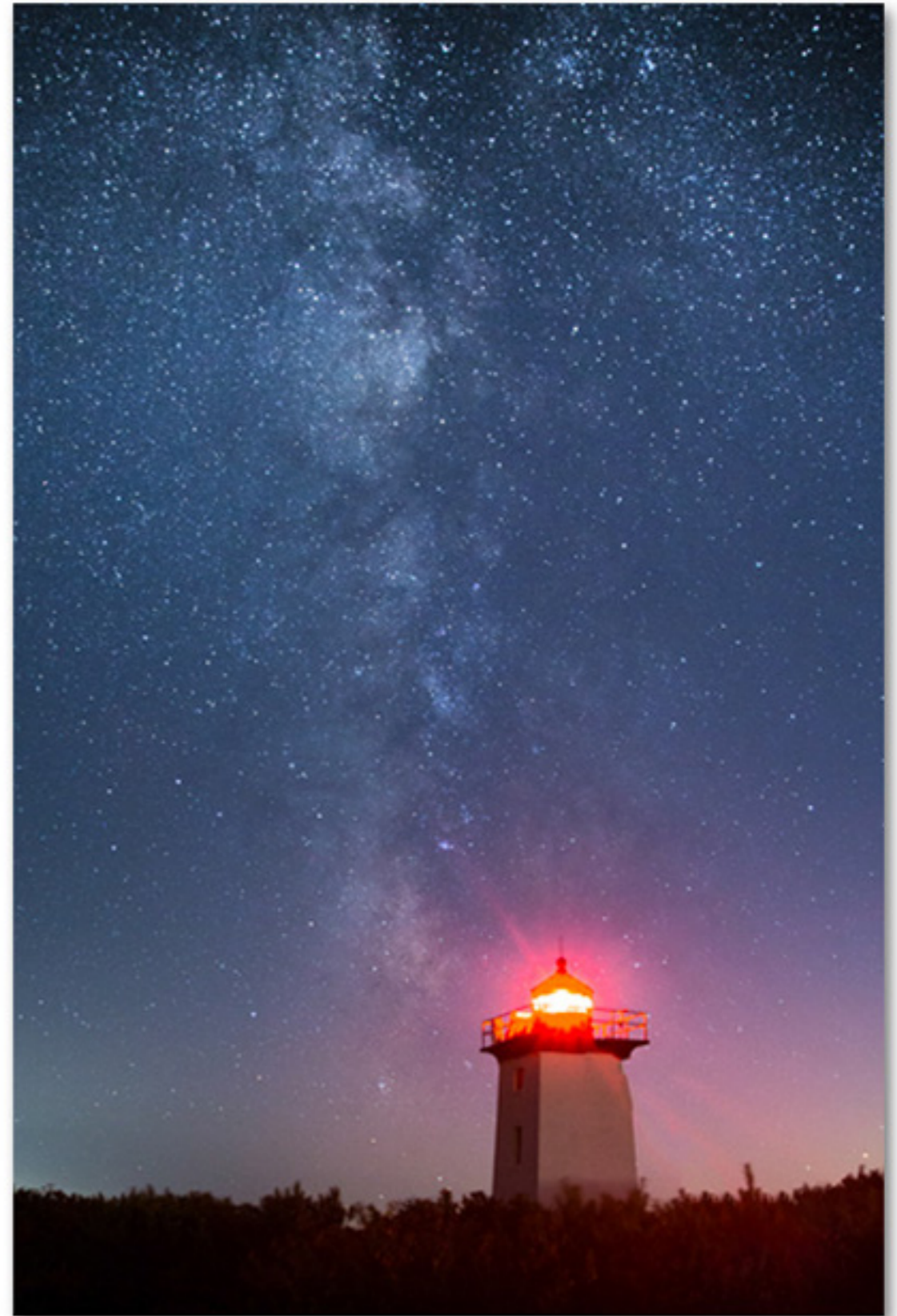
# FOCUSING OPTIONS

Autofocus

Autofocus with backbutton focusing,  
then recompose

Autofocus with focus lock, then recompose

Autofocus and then switch to manual  
to lock focus before recomposing



# FOCUSING OPTIONS

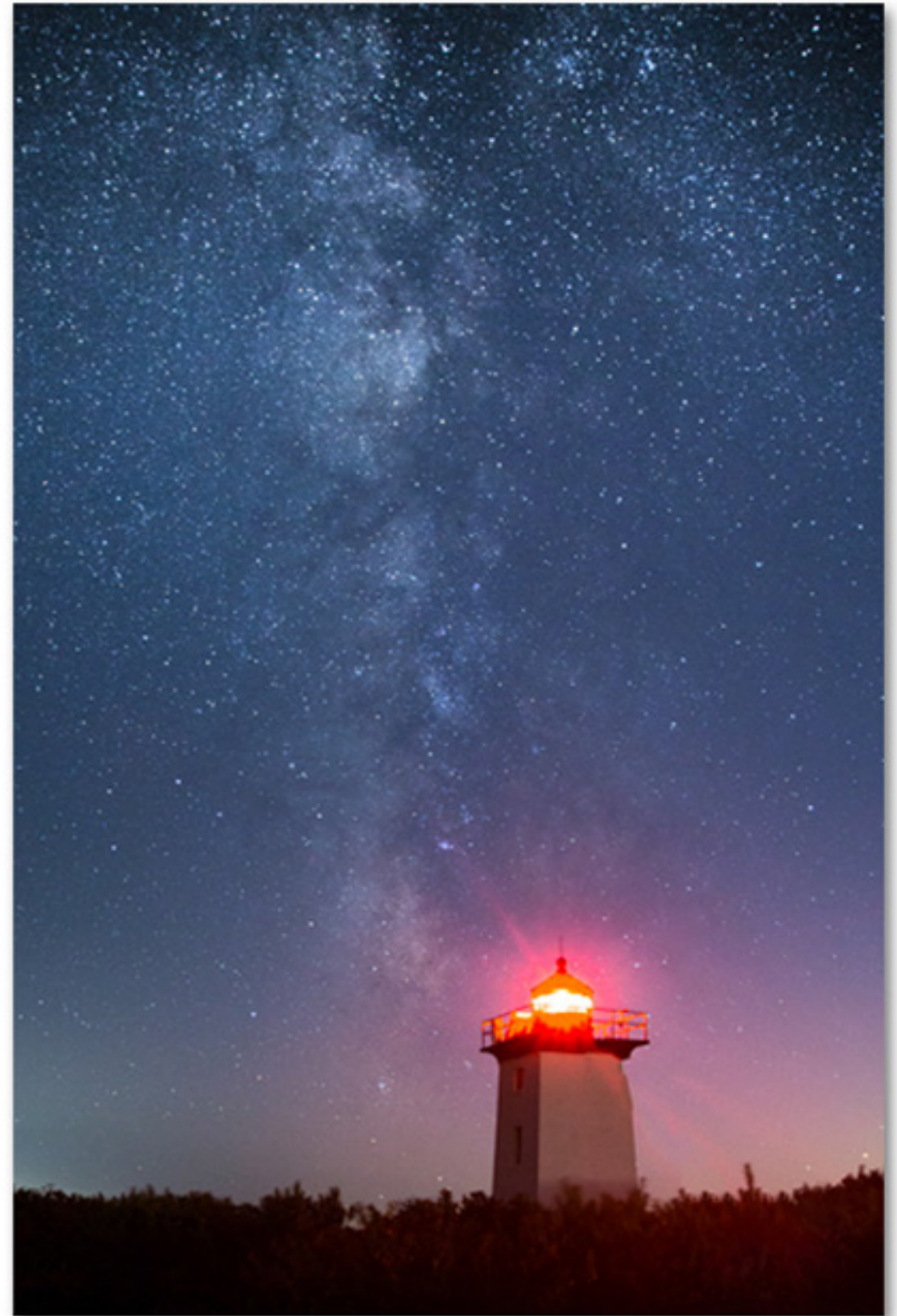
Autofocus

Autofocus with backbutton focusing,  
then recompose

Autofocus with focus lock, then recompose

Autofocus and then switch to manual  
to lock focus before recomposing

Live View with autofocus





# FOCUSING OPTIONS

Autofocus

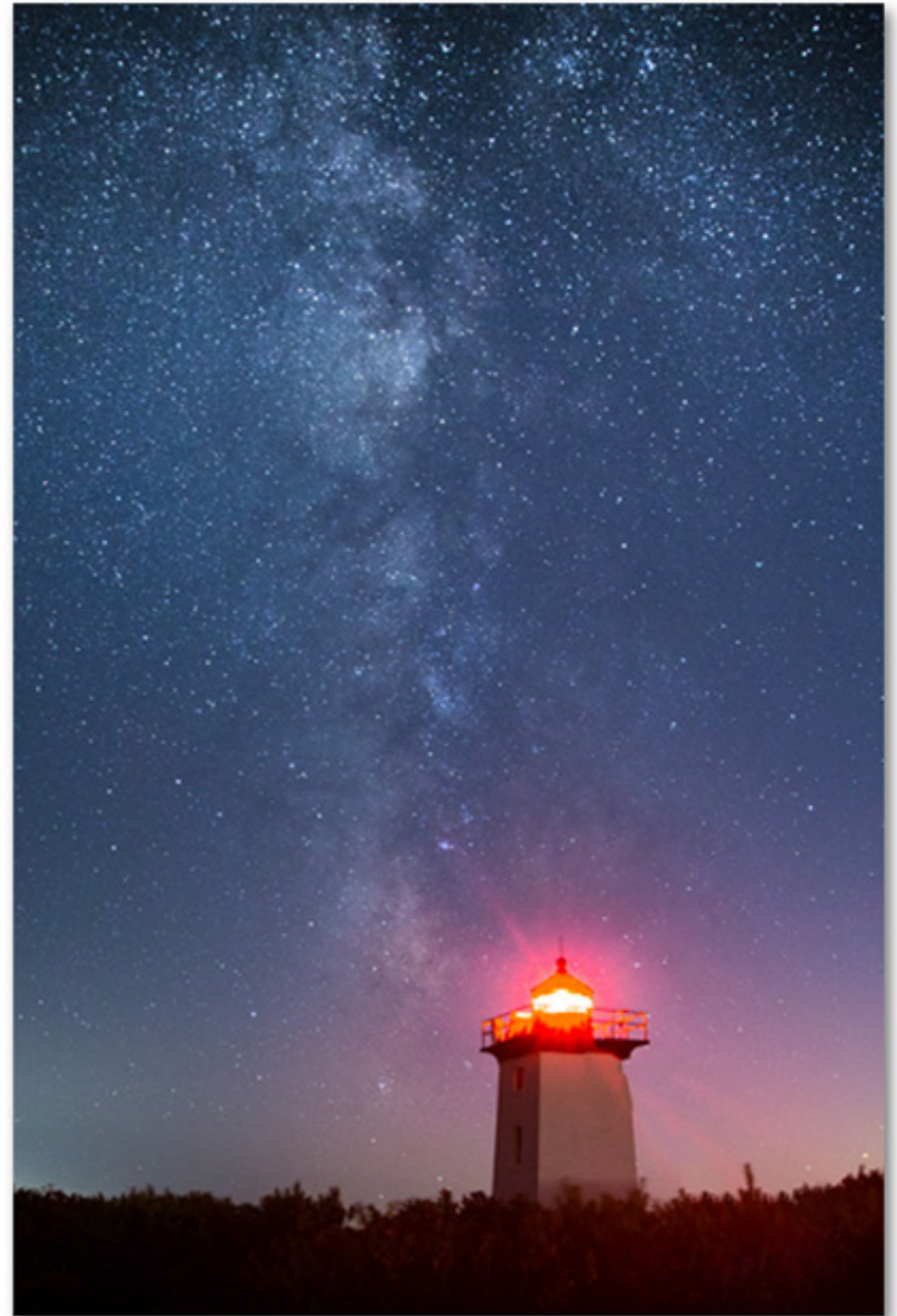
Autofocus with backbutton focusing,  
then recompose

Autofocus with focus lock, then recompose

Autofocus and then switch to manual  
to lock focus before recomposing

Live View with autofocus

Live View with manual focus





# FOCUSING OPTIONS

Autofocus

Autofocus with backbutton focusing,  
then recompose

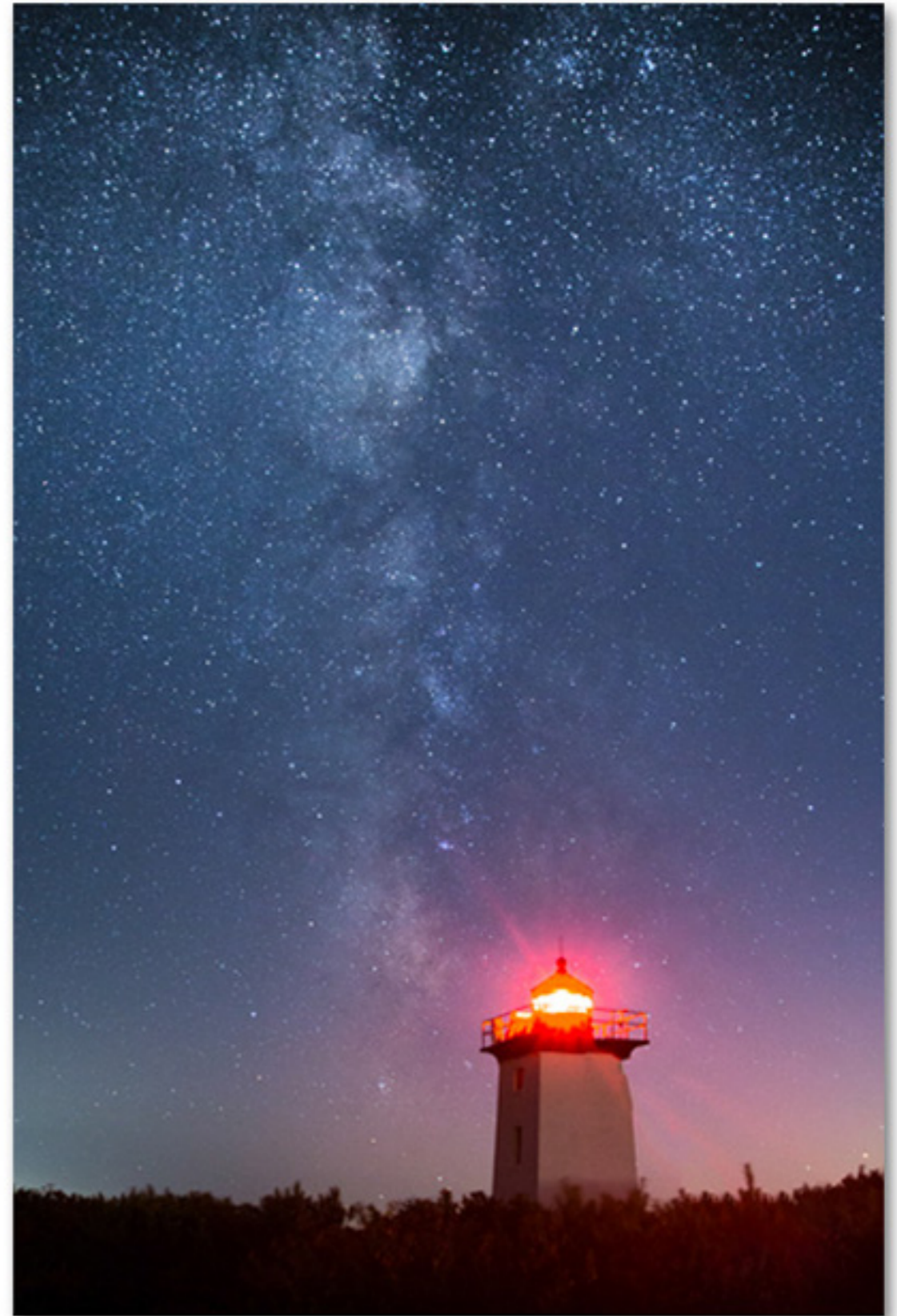
Autofocus with focus lock, then recompose

Autofocus and then switch to manual  
to lock focus before recomposing

Live View with autofocus

Live View with manual focus

Manual focus with lens distance scale





# FOCUSING OPTIONS

Autofocus

Autofocus with backbutton focusing,  
then recompose

Autofocus with focus lock, then recompose

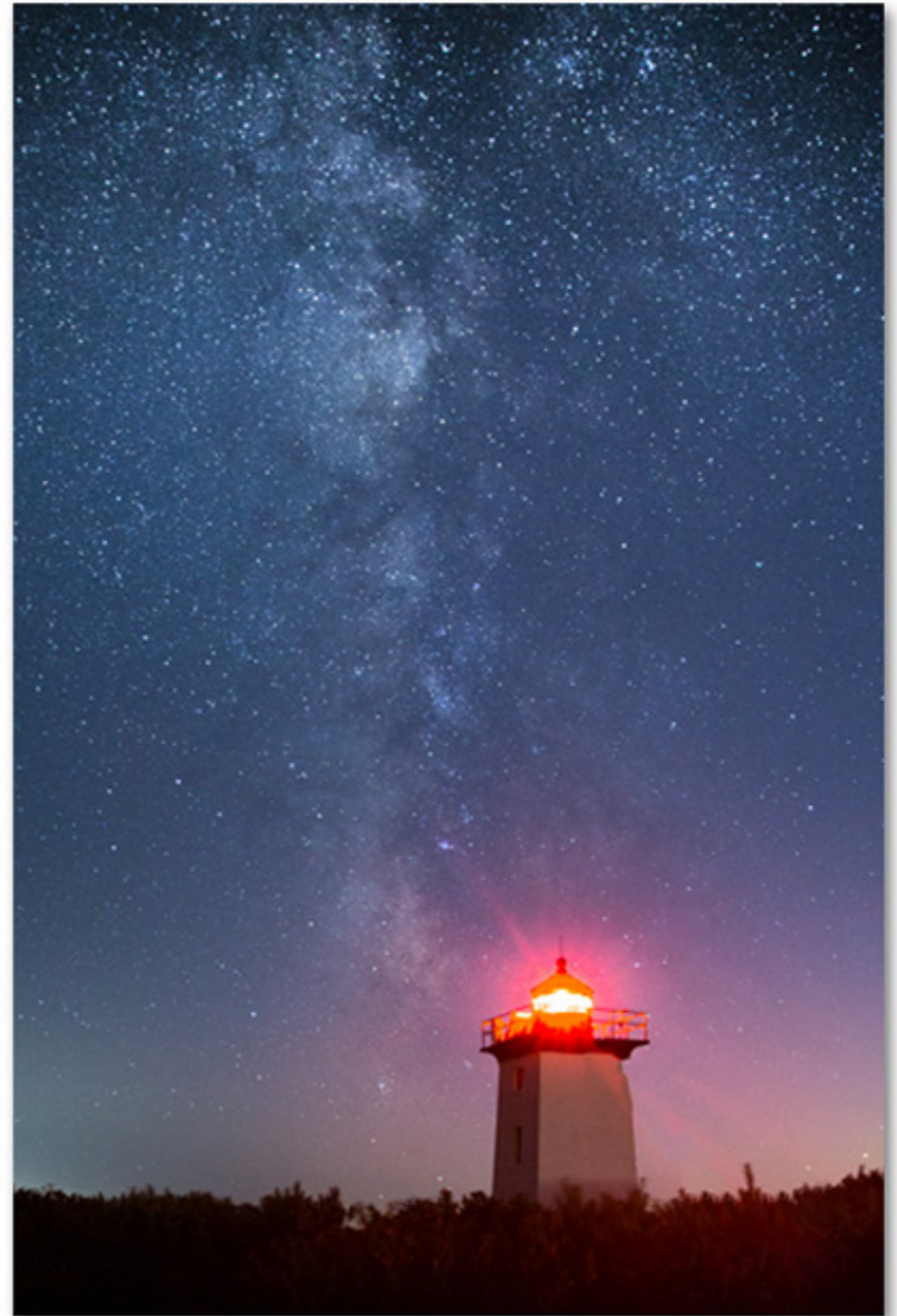
Autofocus and then switch to manual  
to lock focus before recomposing

Live View with autofocus

Live View with manual focus

Manual focus with lens distance scale

Manual focus using hyper focal point focusing





# FOCUSING OPTIONS

Autofocus

Autofocus with backbutton focusing,  
then recompose

Autofocus with focus lock, then recompose

Autofocus and then switch to manual  
to lock focus before recomposing

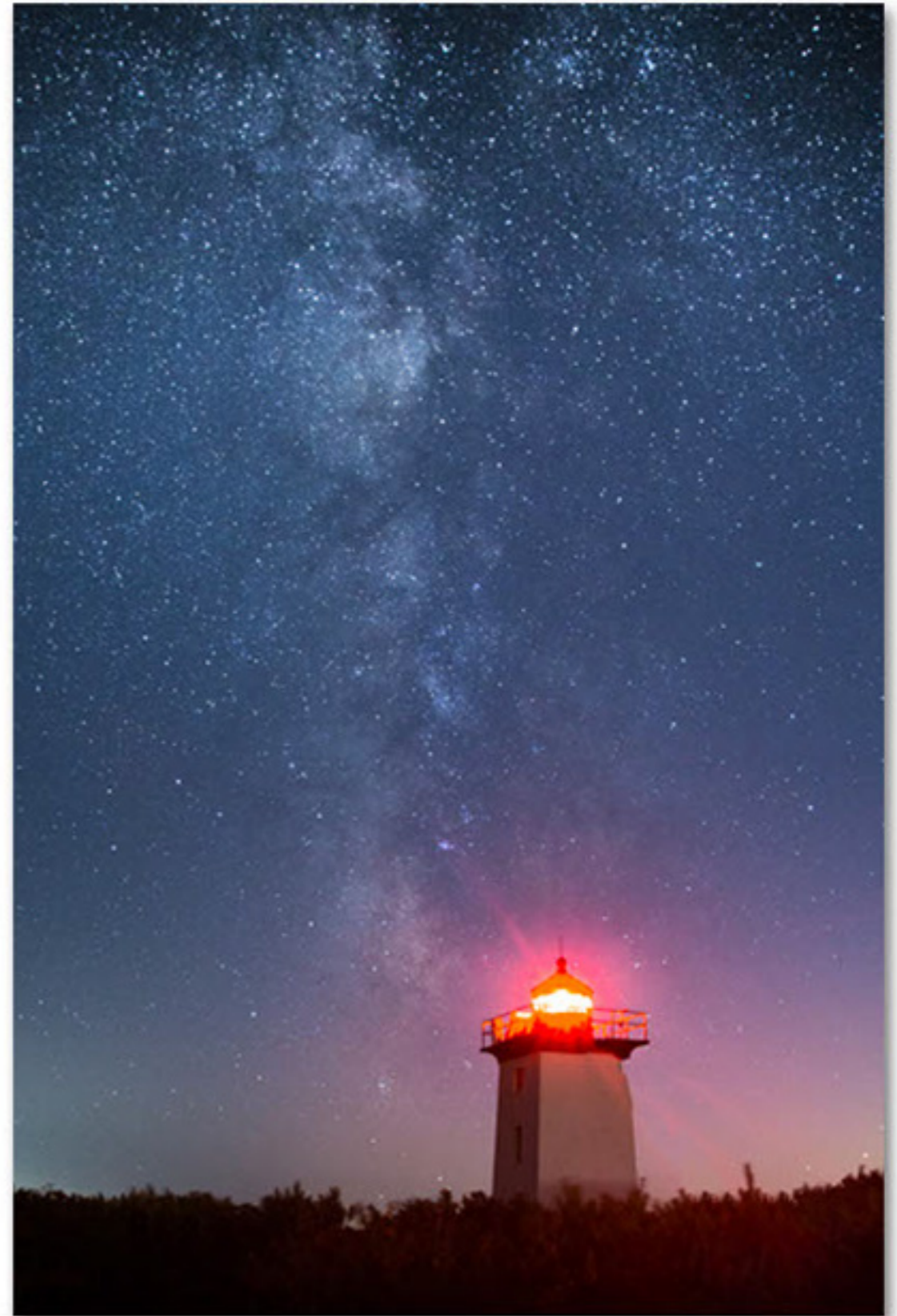
Live View with autofocus

Live View with manual focus

Manual focus with lens distance scale

Manual focus using hyper focal point focusing

Manually turn lens to infinity and hope it works





# How to Focus

## 1. Focus on the Light

- If subject is brightly lit...  
focus normally with autofocus
- If subject is poorly lit...  
focus on nearby light,  
use backbutton focusing or focus lock,  
and then re-compose
- Or use Live View, zoom in on subject,  
and focus manually



# FOCUSING

## Manual Focus w/Distance Scale

Switch lens to manual focus.

Turn the focus ring until the distance scale is set to the correct distance.

Use hyperfocal distance to determine focus distance for maximum depth of field.

Or just estimate the distance to your primary subject.





# FOCUSING

## How to Find the Infinity Point

Focus rings on some lenses turn beyond infinity resulting in blurry pictures.

Test your lens in daytime.

Use autofocus to focus on distant subject.

Check the distance scale and note where infinity really is on the scale.



# FOCUSING

## Manual Focus w/Distance Scale

Switch lens to manual focus.

Turn the focus ring until the distance scale is set to the correct distance.

Use hyperfocal distance to determine focus distance for maximum depth of field.

Or just estimate the distance to your primary subject.







17mm, iso 320, F5, 20 secs.

## Stars and the 500 Rule

For sharp star points

Divide 500 by focal length\*

Results equals max shutter speed

\*Crop sensors multiply focal length by crop factor

Full frame:  $500/24\text{mm} = 21$  sec. exposure

1.5 Crop Sensor w/24mm lens:  $500/36$  ( $24 \times 1.5$ ) = 14 sec. exposure



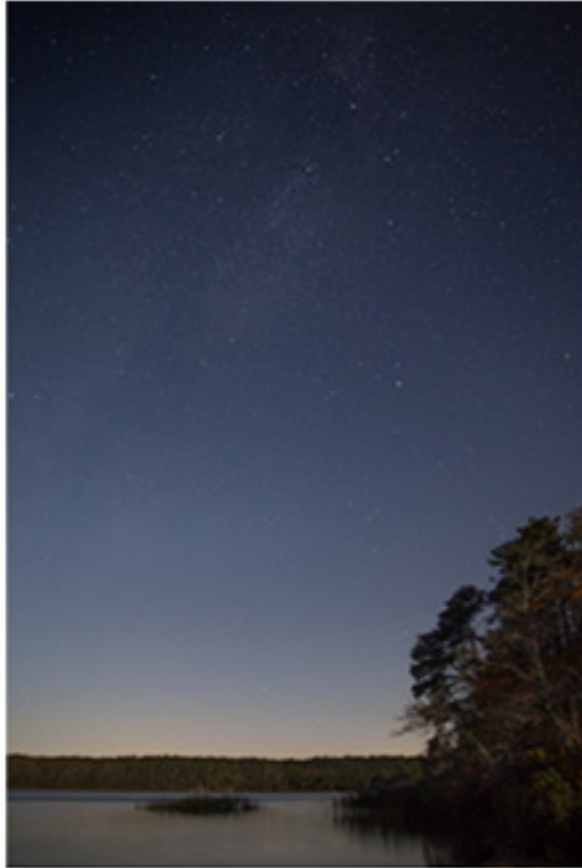
F4, 30 secs. ISO 3200



Post processing

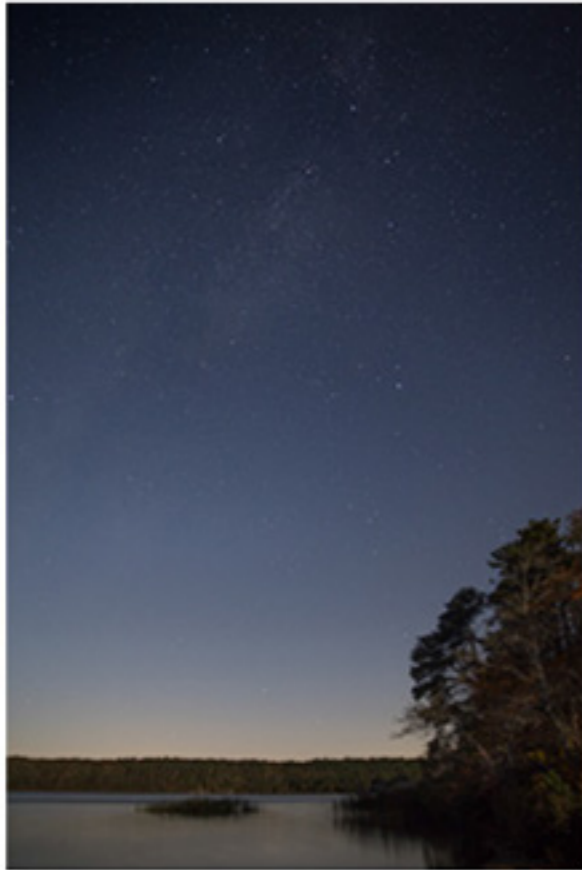


# ISO

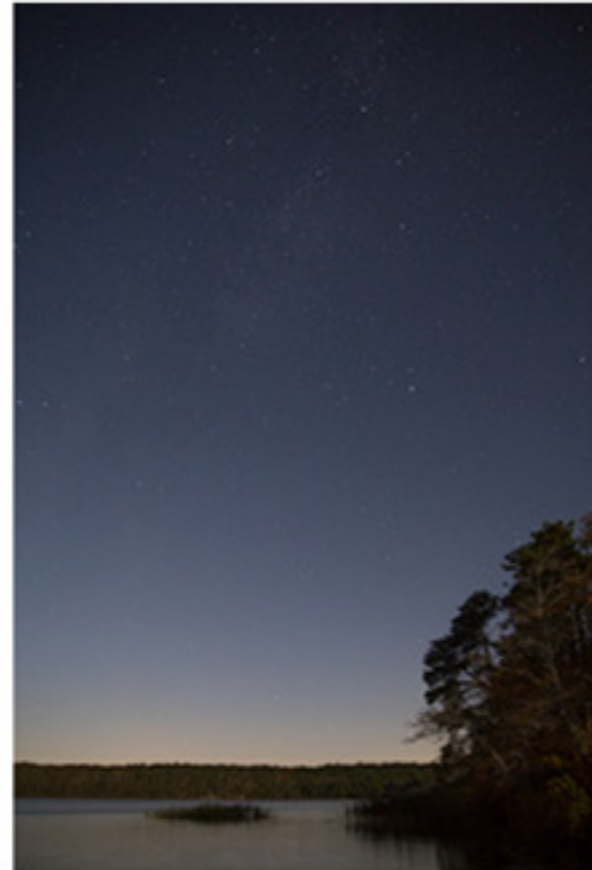


ISO 320, 20 secs., f2.8

# ISO



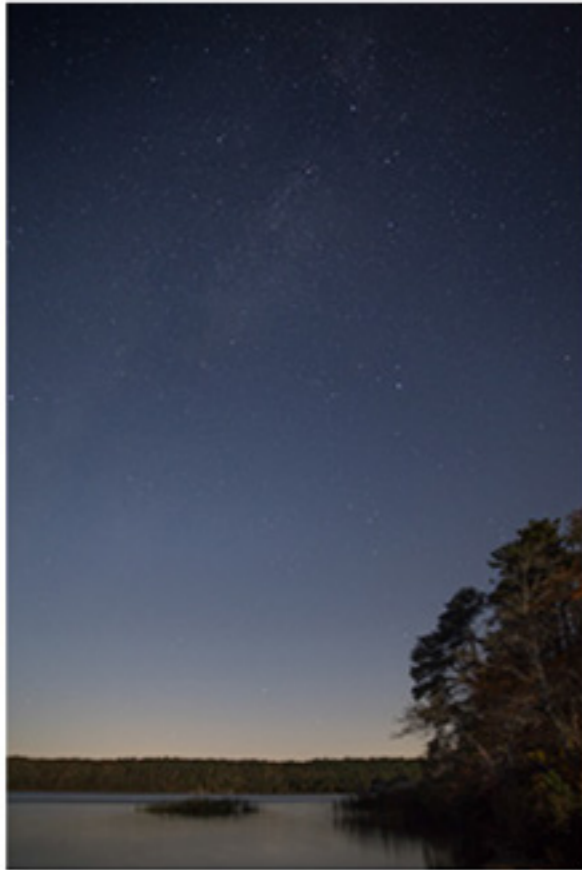
ISO 320, 20 secs., f2.8



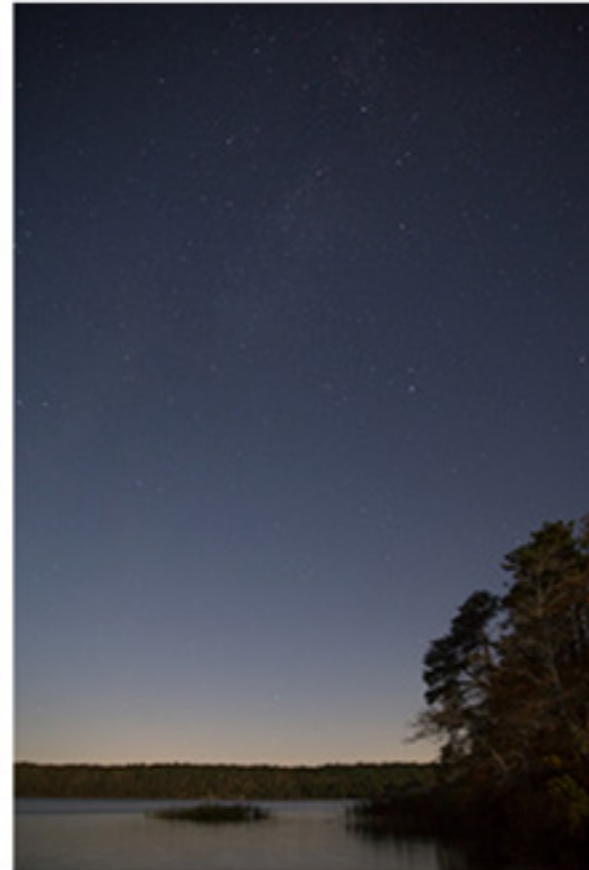
ISO 640, 10 secs., f2.8



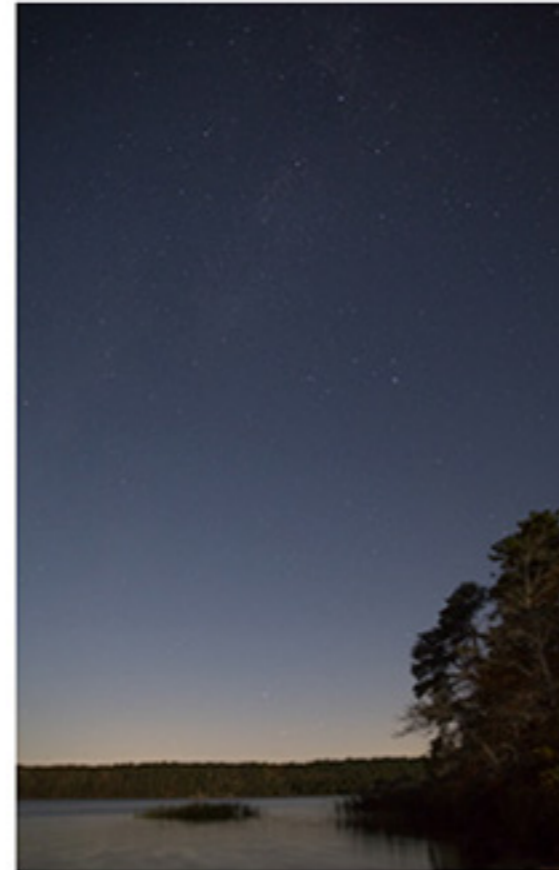
# ISO



ISO 320, 20 secs., f2.8

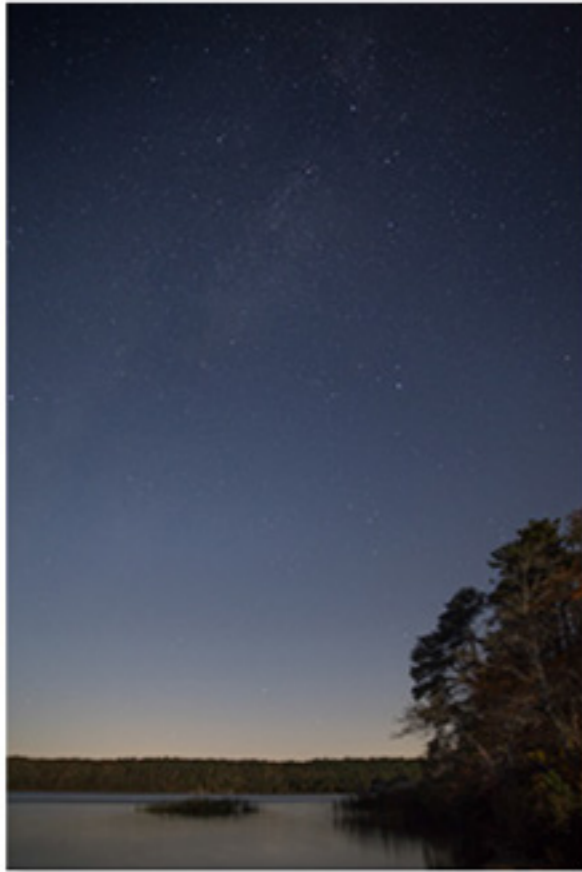


ISO 640, 10 secs., f2.8

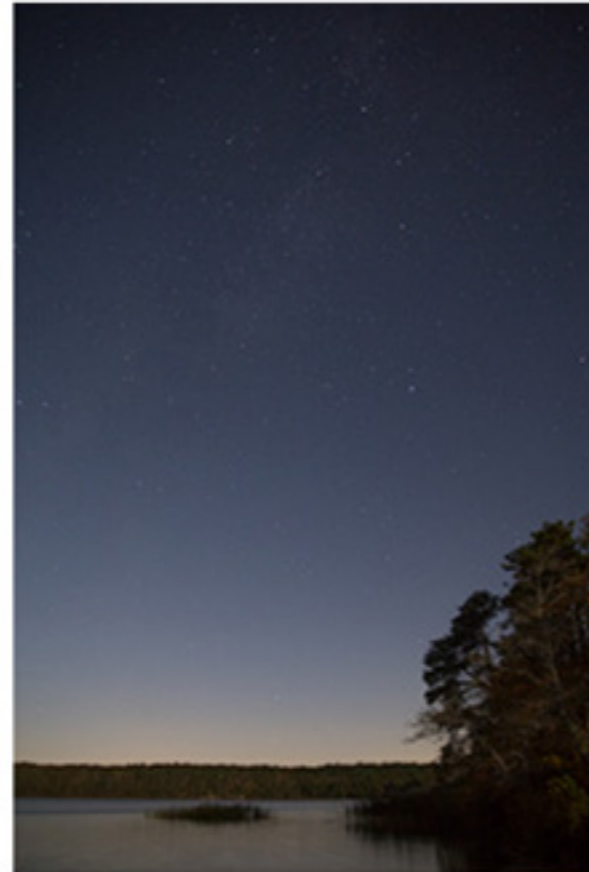


ISO 1250, 5 secs., f2.8

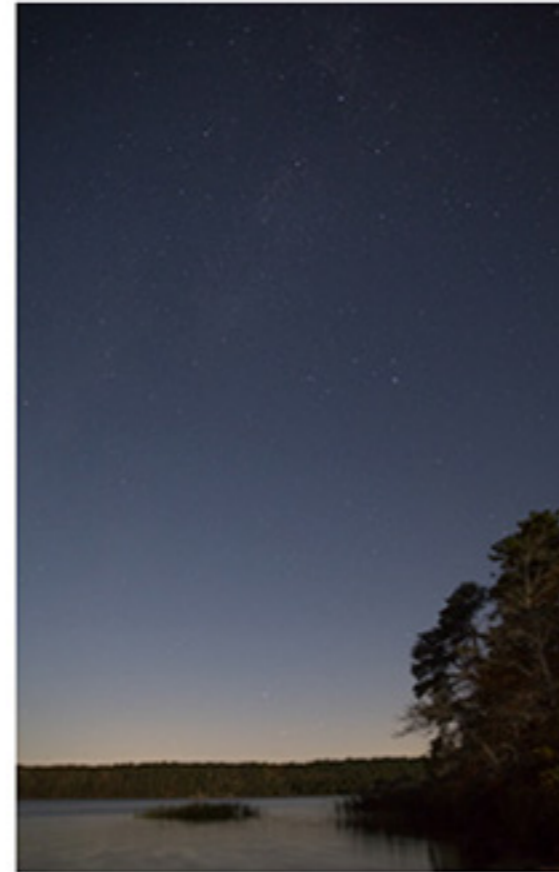
# ISO



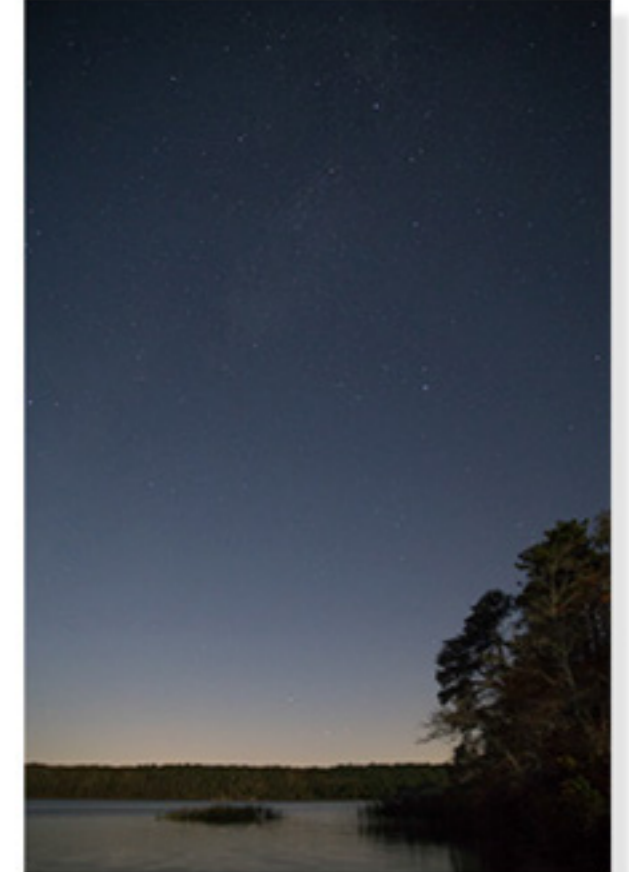
ISO 320, 20 secs., f2.8



ISO 640, 10 secs., f2.8



ISO 1250, 5 secs., f2.8



ISO 2500, 2.5 secs., f2.8





ISO 320, 20 secs.





ISO 2500, 2.5 secs.





ISO 320, 20 secs.



ISO 2500, 2.5 secs.





ISO 320, 20 secs.



ISO 2500, 2.5 secs.



# NIGHT PHOTOGRAPHY RESOURCES

## Websites

The Photographer's Ephemeris  
[www.photoephemeris.com](http://www.photoephemeris.com)

Cape Cod Tides  
[www.capetides.com](http://www.capetides.com)

Moon Phases Calendar  
[http://www.moonconnection.com/moon\\_phases\\_calendar.phtml](http://www.moonconnection.com/moon_phases_calendar.phtml)

Celestial Observer  
[www.calsky.com](http://www.calsky.com)

## Apps

The Photographer's Ephemeris

Star Walk - Live view of night sky

Luna Solaria - Moon phases

LED Torch - Flashlight with colored light