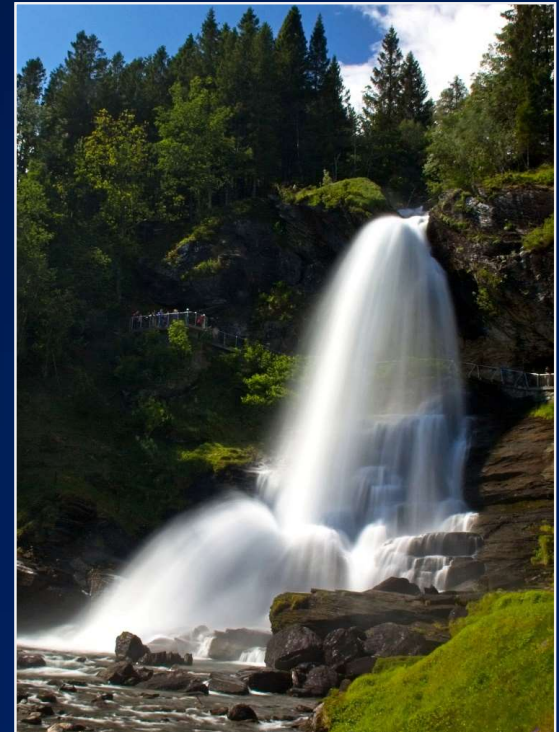


# Photo 101 – Long exposures

- What situations suit long exposure shots?
- What equipment do you need? (tripod?, ND filter?)
- What exposure mode to use – Aperture, shutter, manual?
- How can ISO help?
- Can you long exposure with a cell phone?

Presented by Lynda Buske



# What situations suit long exposures

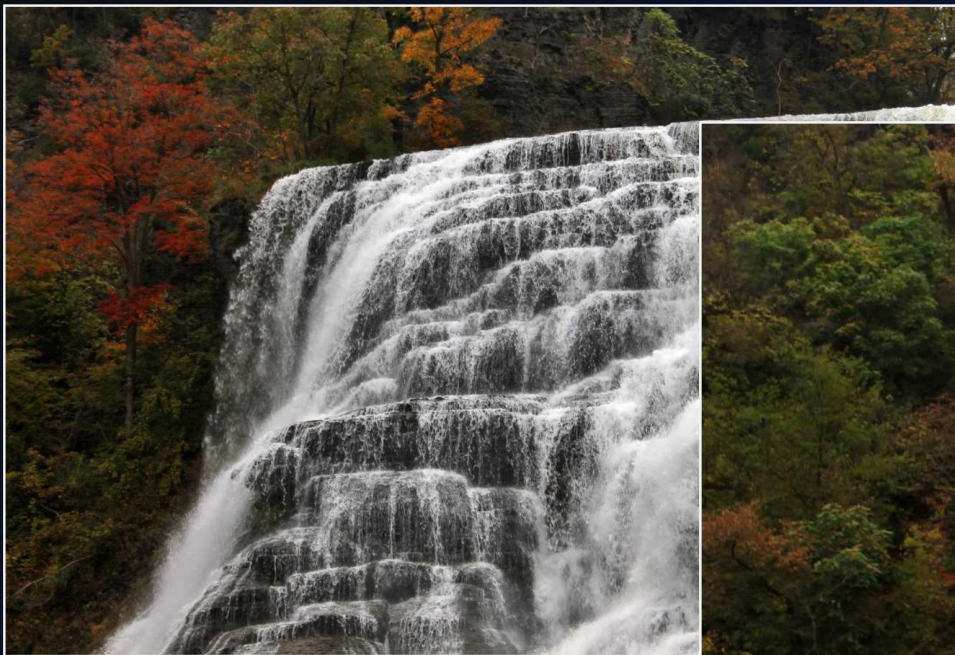
- Movement of water – ocean, river, waterfall
- Star trails
- ICMs (intentional camera movement)
- Panning
- Blurring subject in motion
- Low light, blue hour, night shots
- Fireworks



Chris Taylor

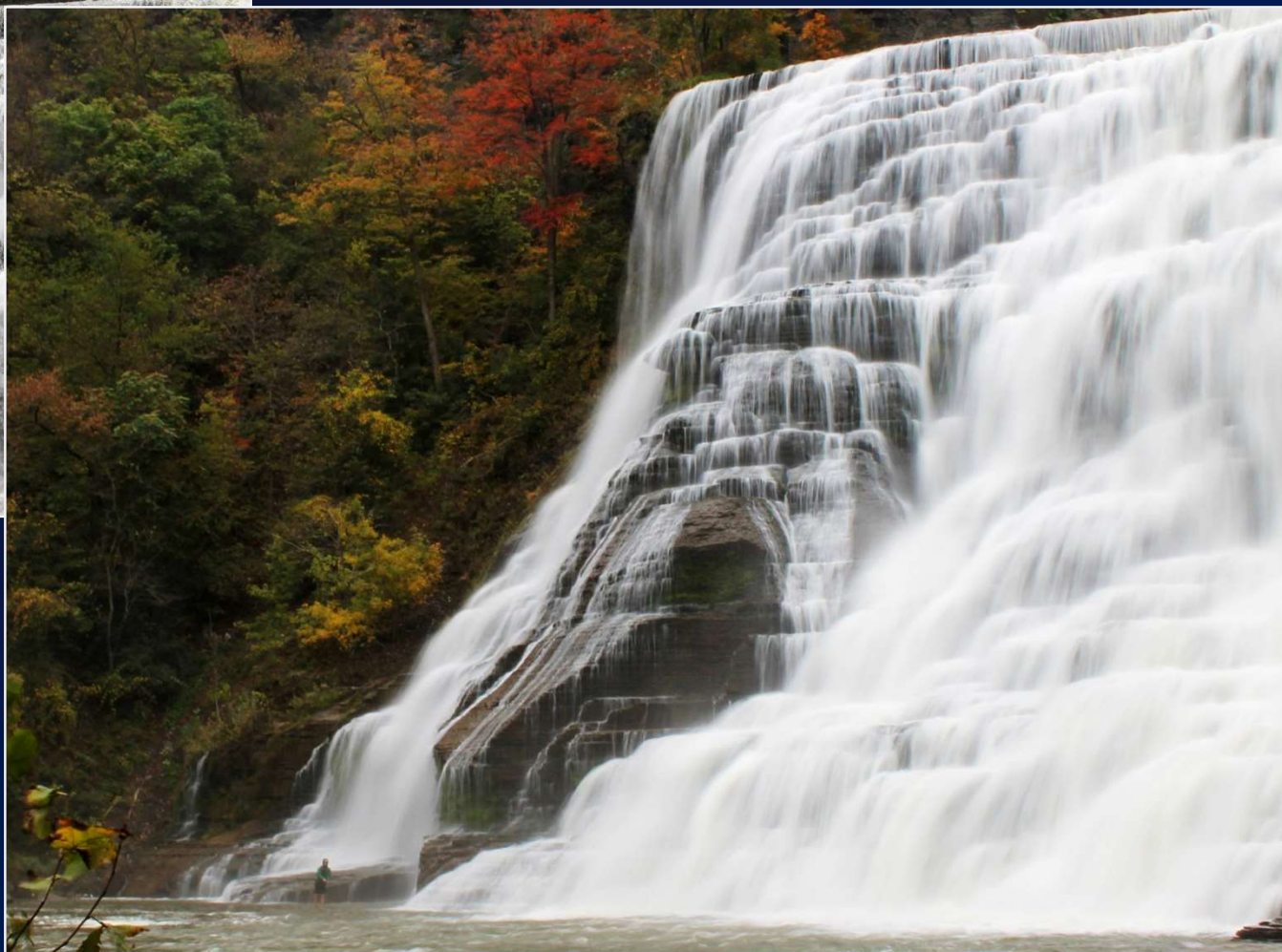
# Movement of water

- Have a tripod or sturdy resting place (railing, terra firma)
- Set aperture to smallest opening (highest number)
- Set ISO to low as possible to get the longest exposure
- If still too fast (e.g. 1/20 sec or faster), use a neutral density filter
- Set time delay, remote shutter, cable release



1/160

1/6 sec - person  
didn't blur





Or you can  
choose to  
show the  
movement



Pierre Roy



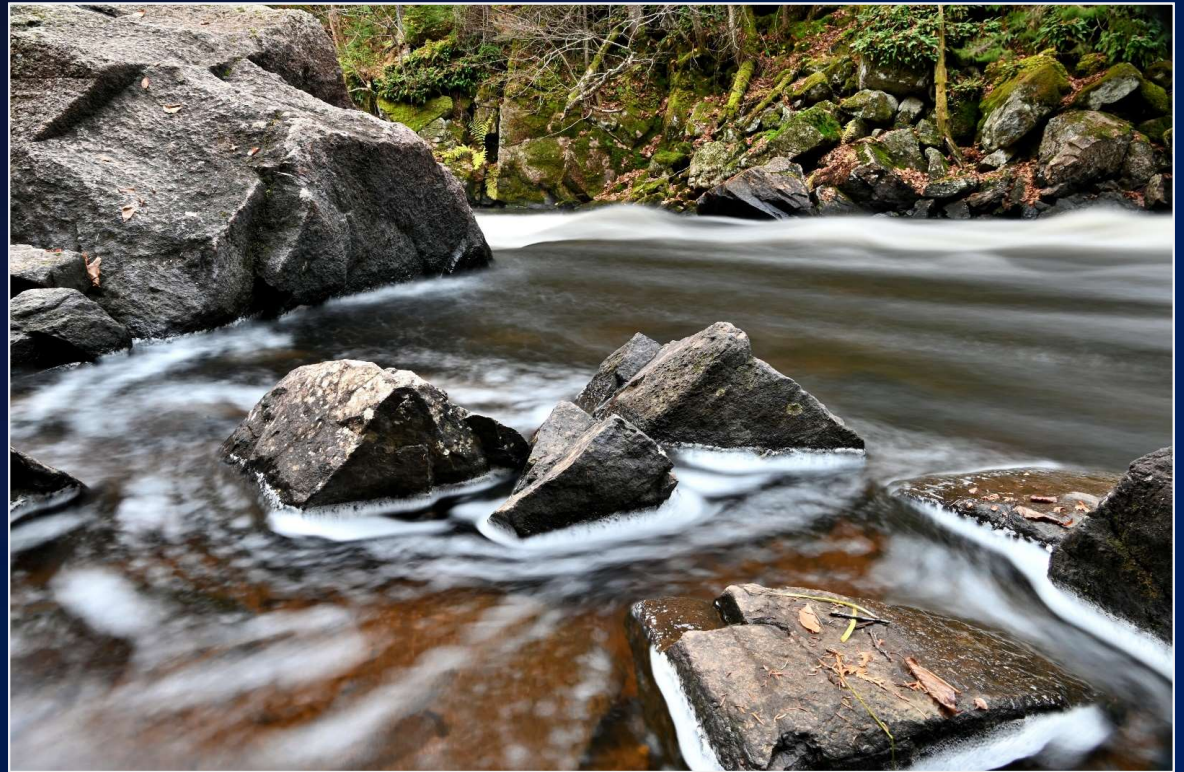


2.5 sec



## Movement of water

13 sec





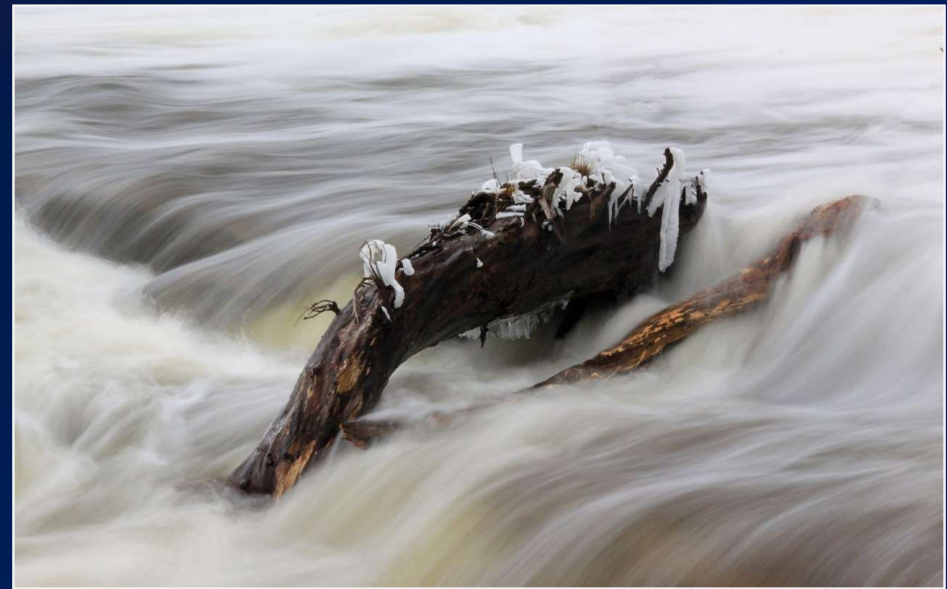
Don't need much water

1/5 sec



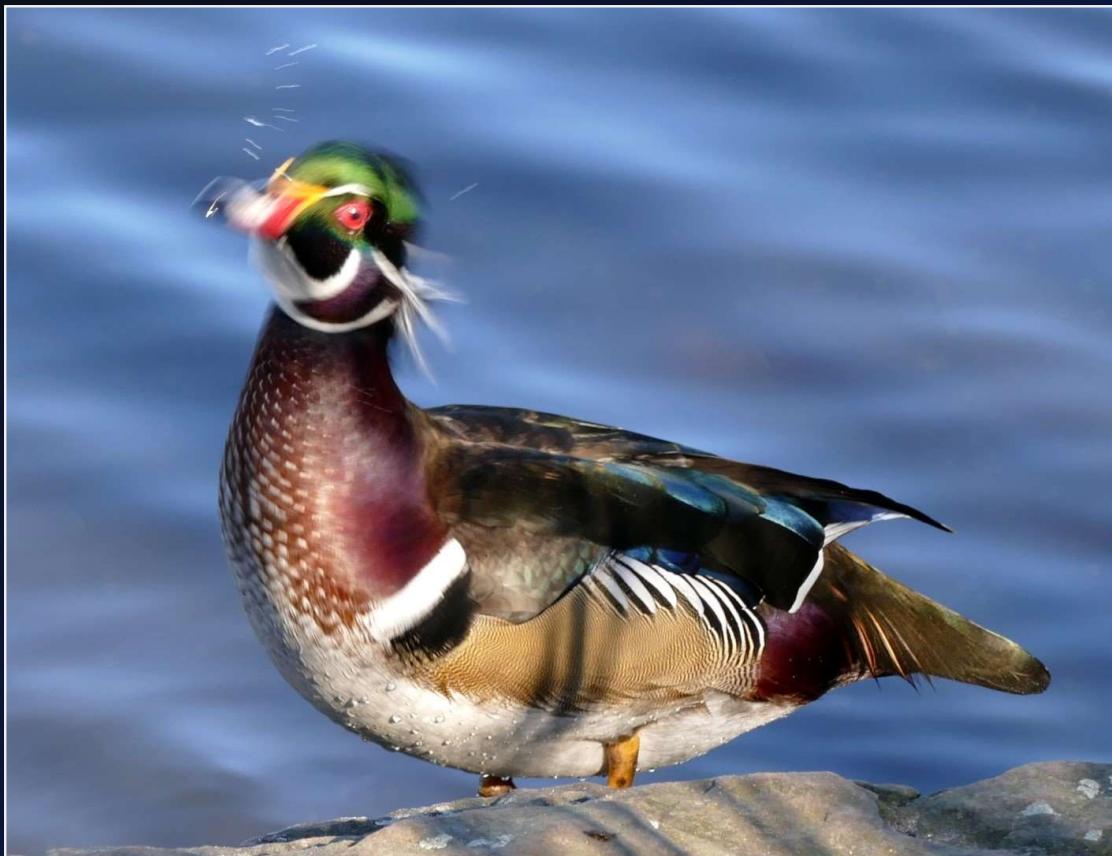
Doesn't have to be really  
long exposure

1/3 sec

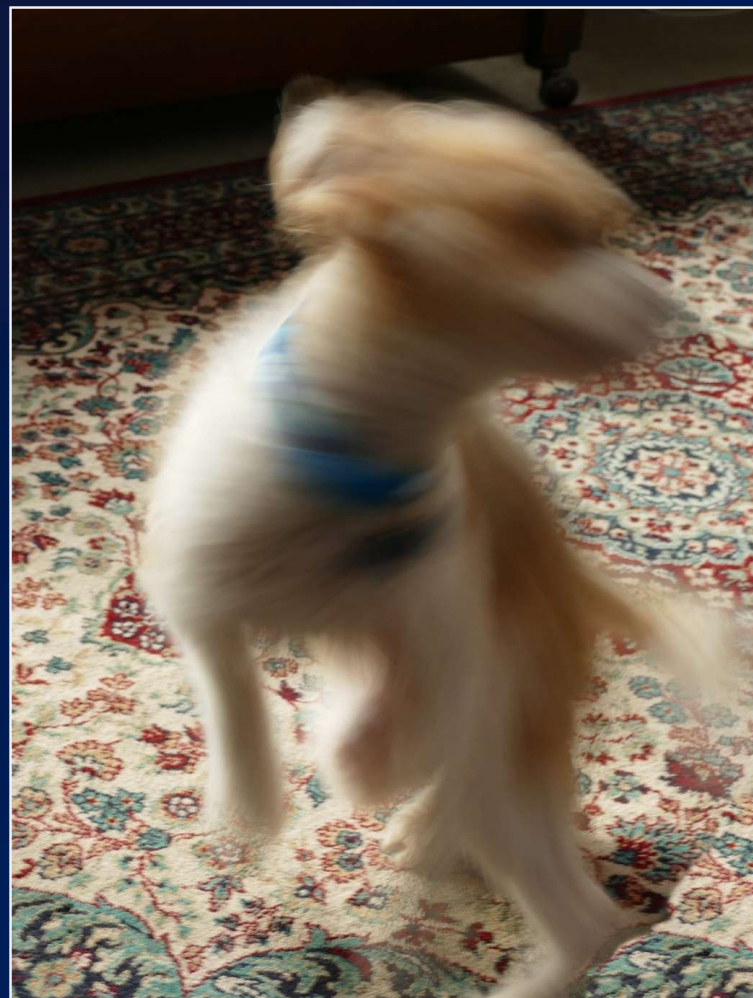


How much blur is okay?

1/100 sec



1/20 sec





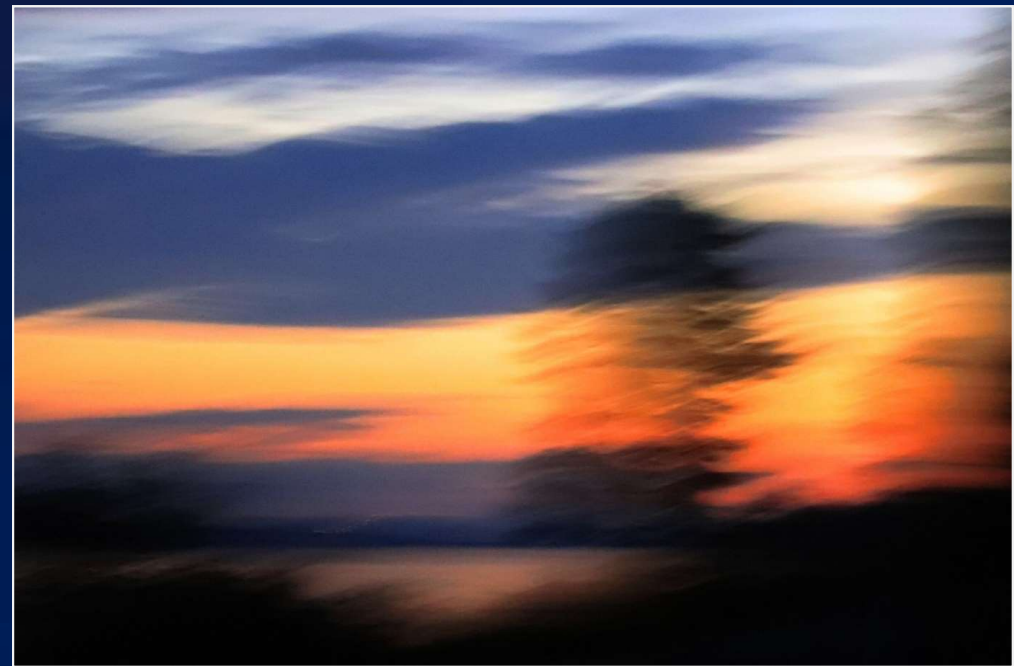
Panning

1/120 sec



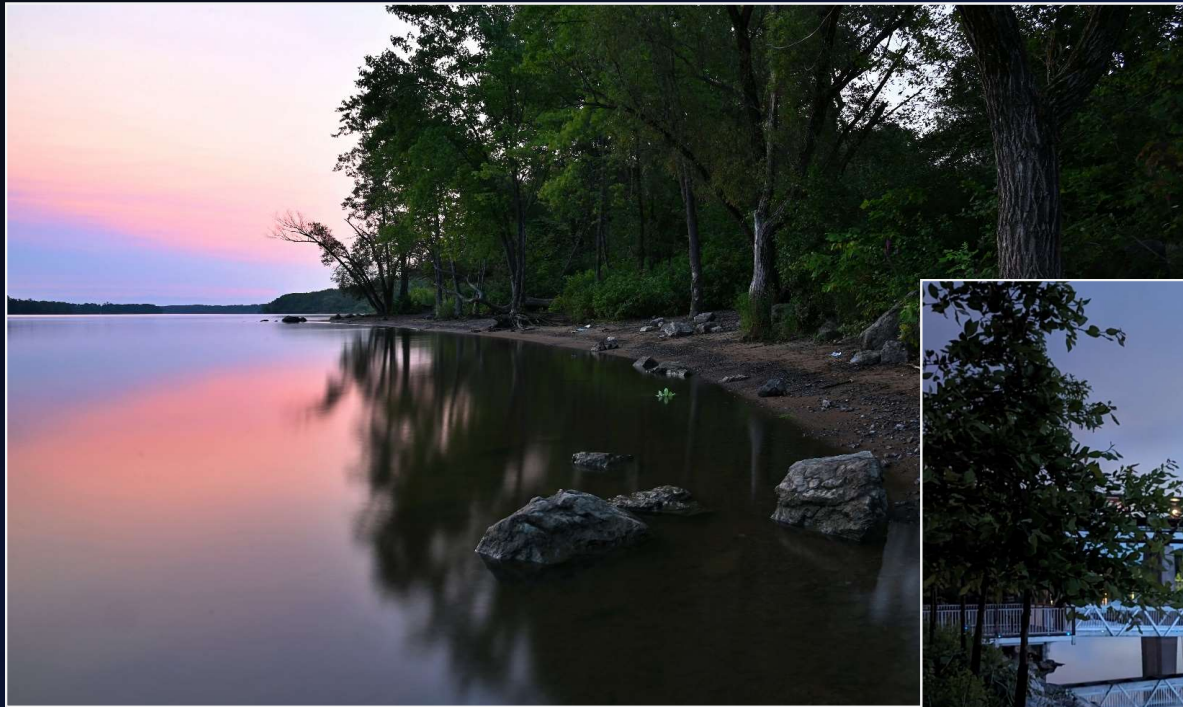
ICM (intentional camera motion)

1/2 second



## Low light - blue hour, night

15 sec, make sure there is no wind!



1/15 sec



Set ISO to 100, use ND filter

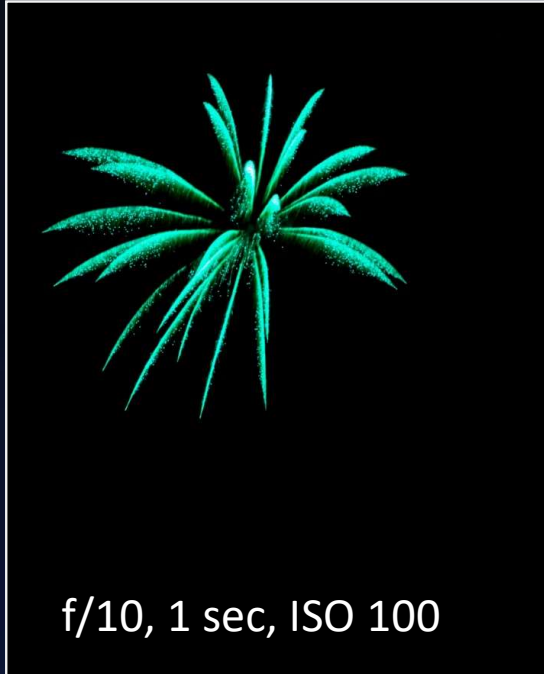


# Cell phone image



Note the fuzzy edges

# Fireworks by Chris Taylor



Aperture: f/8 – f/16  
Shutter: 0.5 - 5 seconds  
ISO 100 – 200



**Tripod  
is a  
must!**