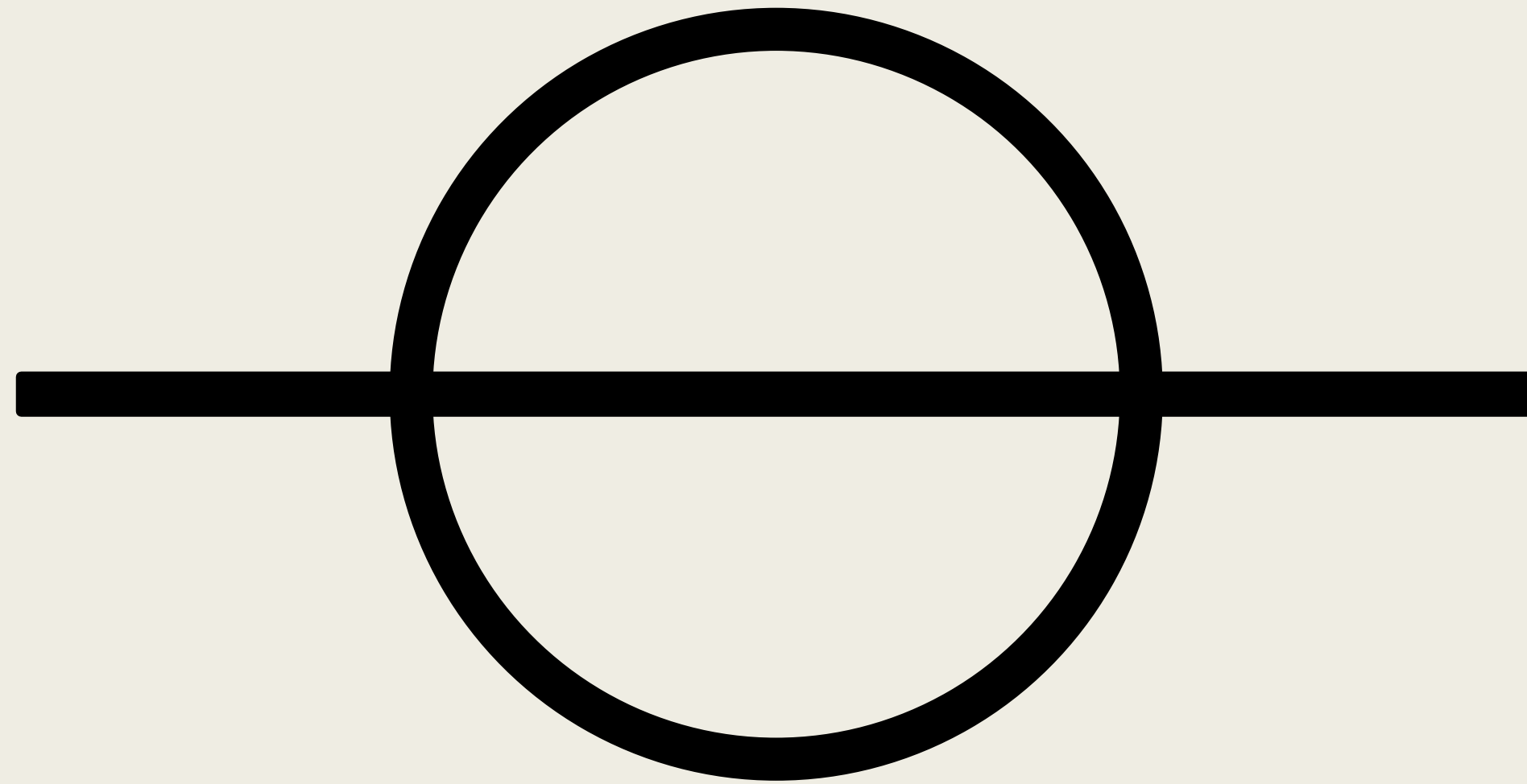


Film Photography



It's (not) magic

THE BASICS

Yes, we're starting here

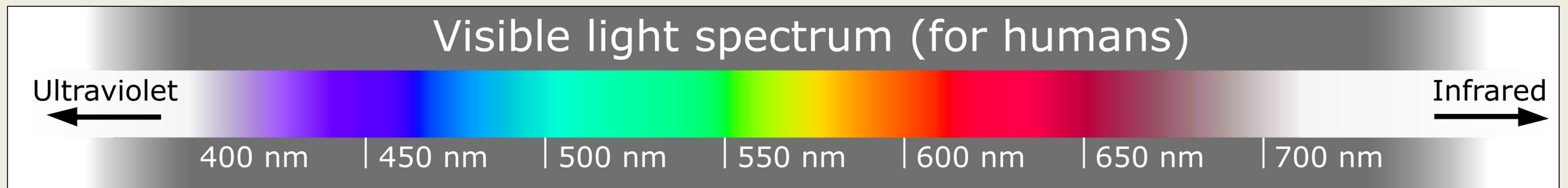
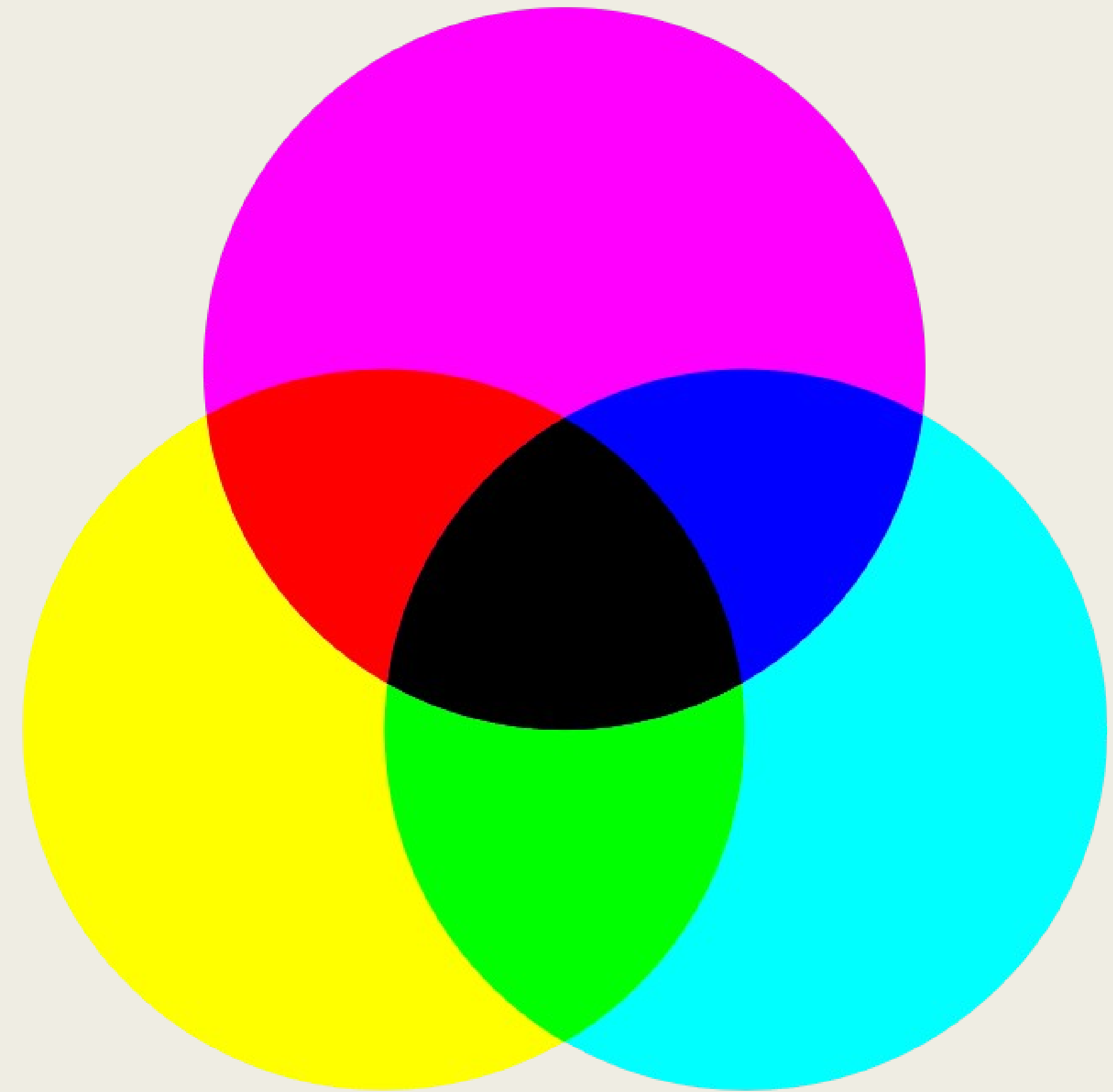


What even is film?

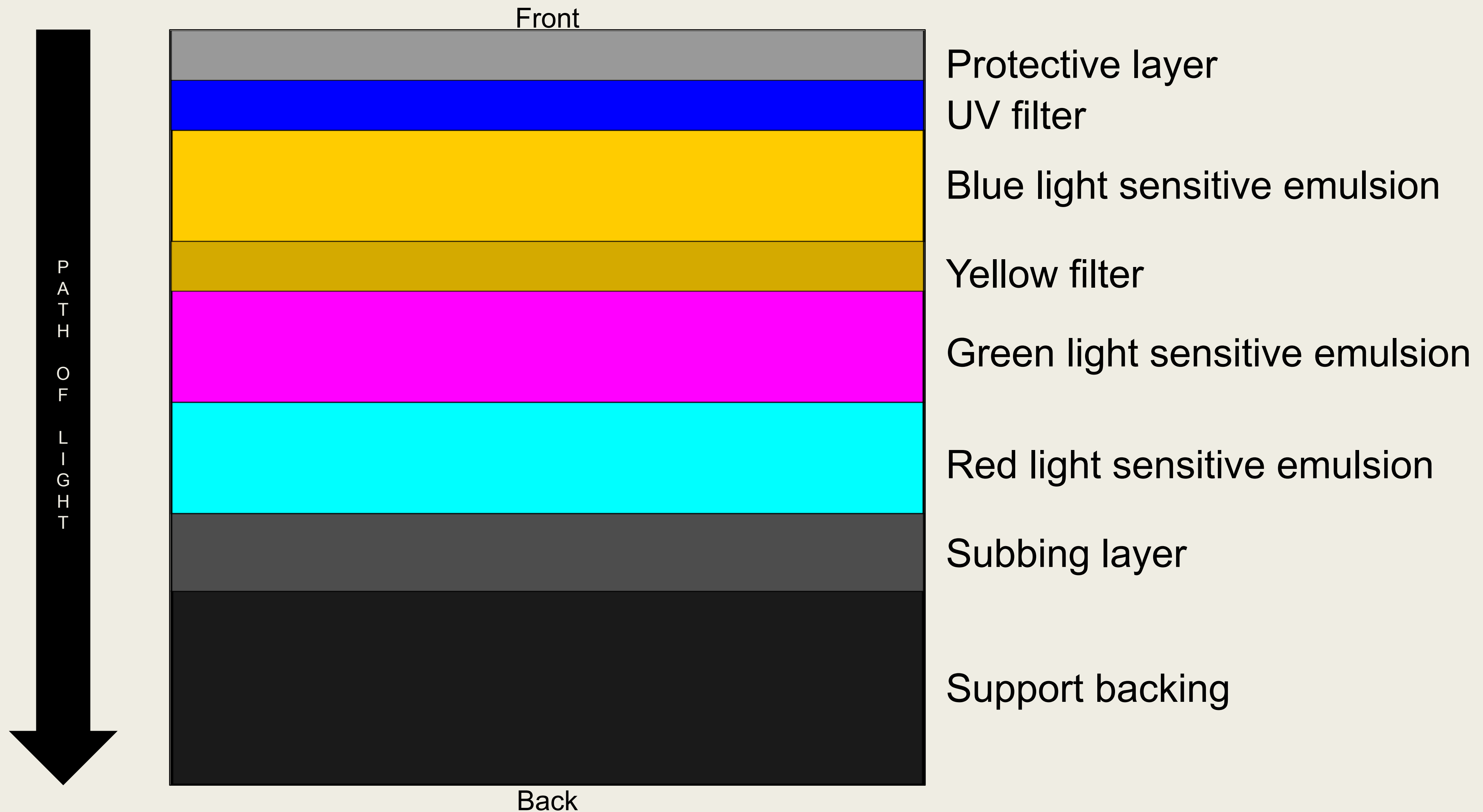
- Technology for capturing light on physical medium
- Light sensitive emulsion on a support material
- Color, Black/White, Infrared

Physics of light

- Subtractive color mixing
- Yellow filters blue
- Magenta filters green
- Cyan filters red
- Printers use CMYK

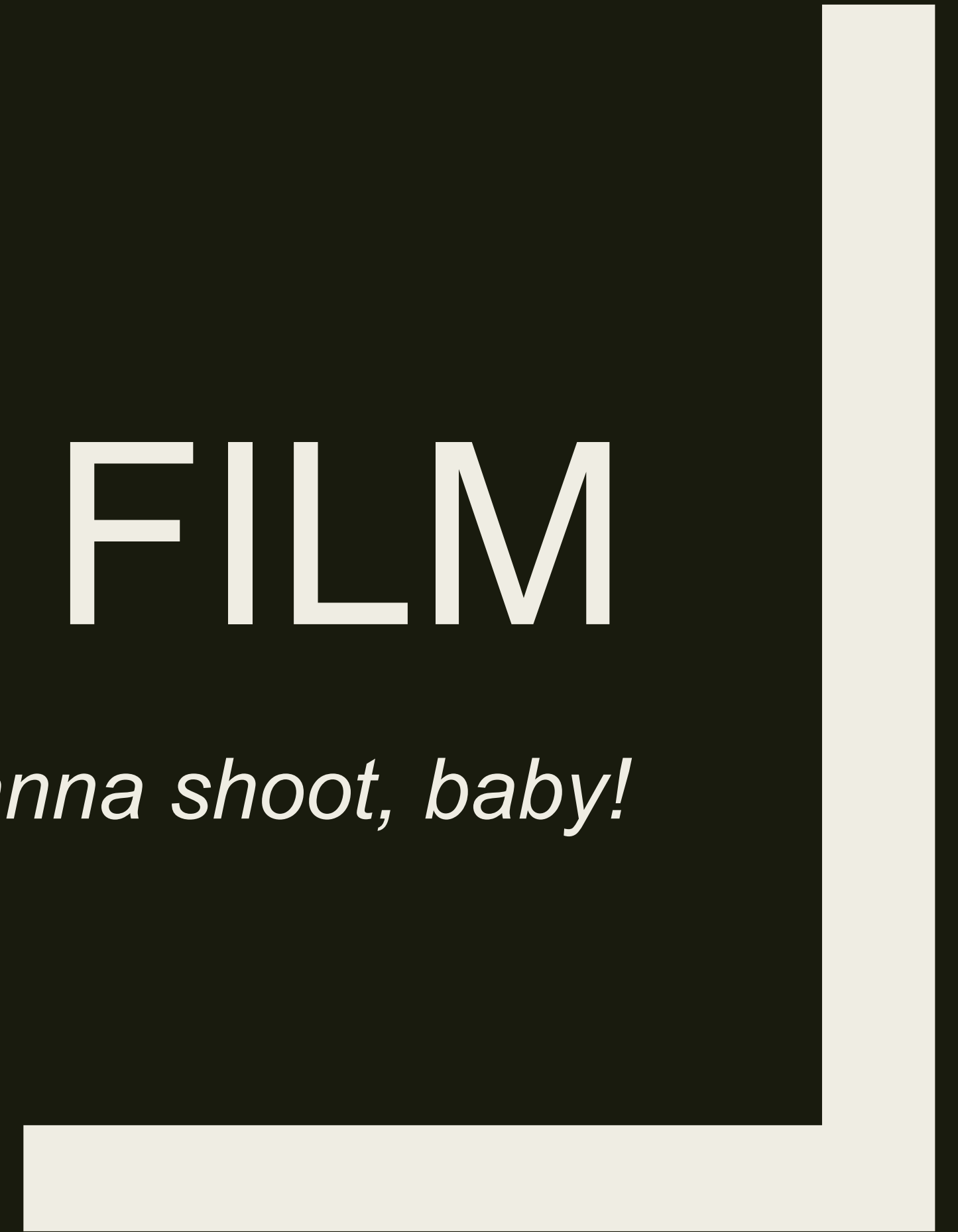


Anatomy of a 3-layer color film



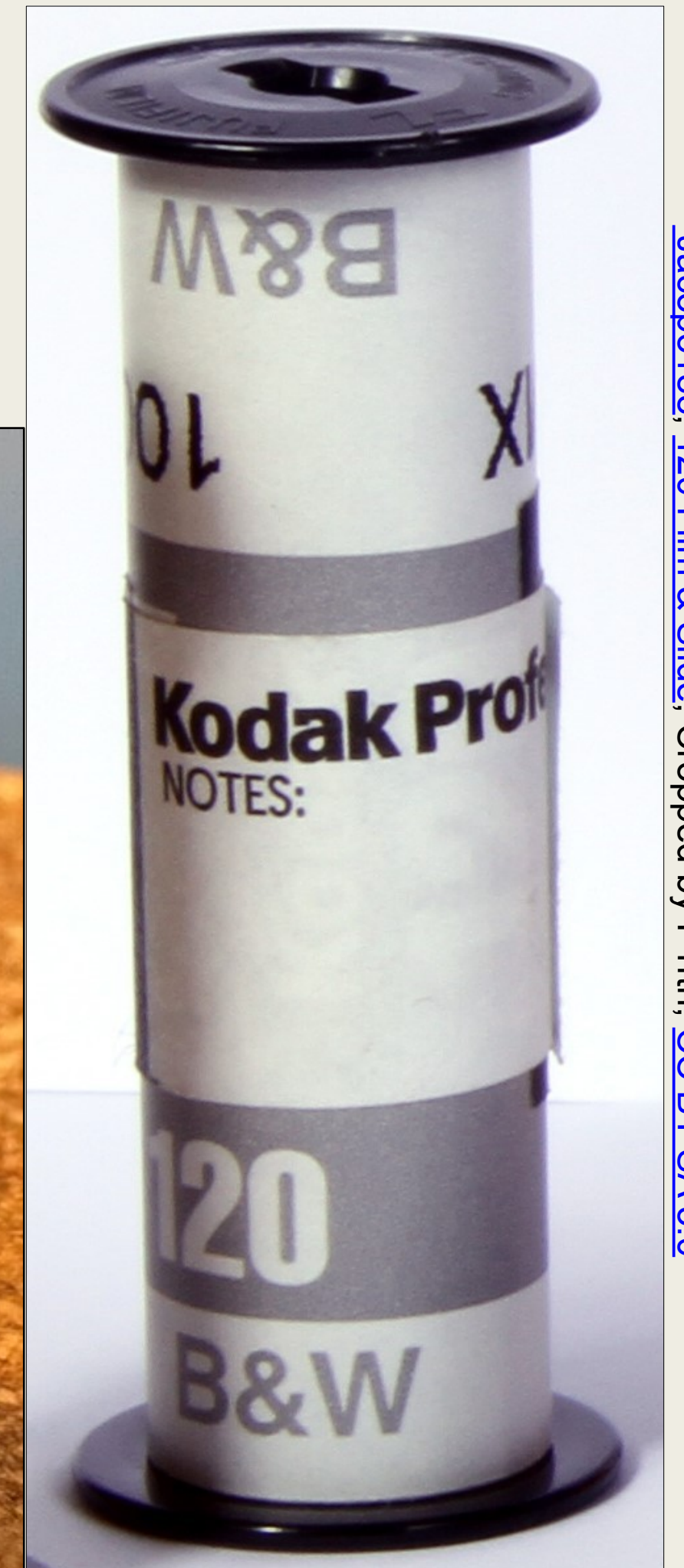
SHOOTING FILM

Hey yeah, I wanna shoot, baby!



The film format

- Cartridge
 - 35mm
 - Super 8
- Roll film
 - 120
- Sheet film
 - Instant-Film (Polaroid, Fuji Instax)
 - Single sheets (4x5, 8x10 inch)



[Jacopo188, 120 Film & Slide, Cropped by F11th, CC BY-SA 3.0](#)

The cameras

- **Single Lens Reflex (SLR)**



The cameras

- Single Lens Reflex (SLR)
- **Twin Lens Reflex (TLR)**



The cameras

- Single Lens Reflex (SLR)
- Twin Lens Reflex (TLR)
- **Viewfinder/Rangefinder**



The cameras

- Single Lens Reflex (SLR)
- Twin Lens Reflex (TLR)
- Viewfinder/Rangefinder
- **Point-And-Shoot**



The cameras

- Single Lens Reflex (SLR)
- Twin Lens Reflex (TLR)
- Viewfinder/Rangefinder
- Point-And-Shoot
- **Large format/Sheet film**



Balazs Sprenc, My new 8x10" camera, CC BY-NC-ND 2.0

DEVELOPING FILM

Out of the dark! And into the light!

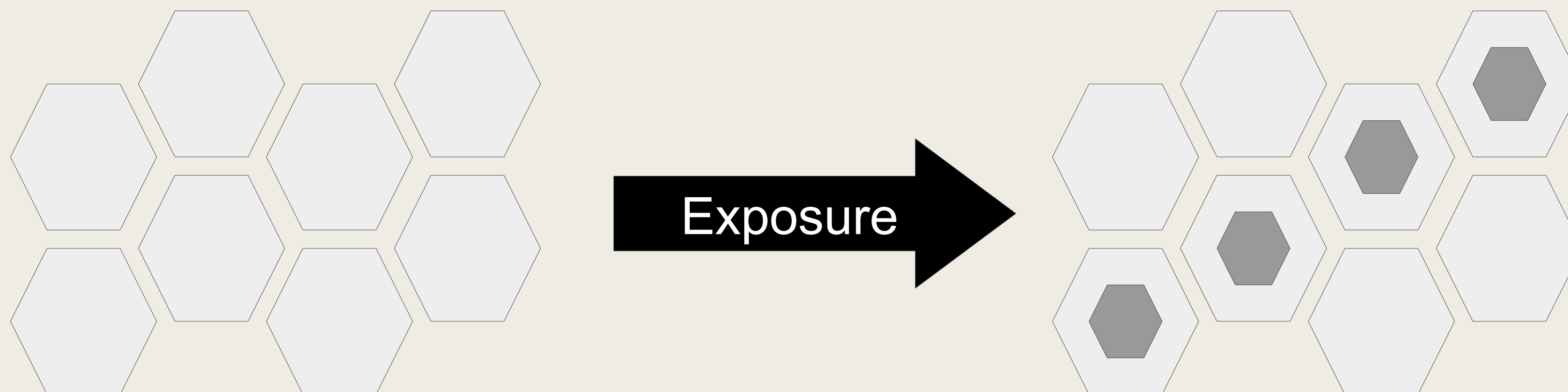


The development process

- Total darkness (Darkroom, development tank)
- Process depends on film (B/W, C-41, E-6)
- Some processes are no longer offered

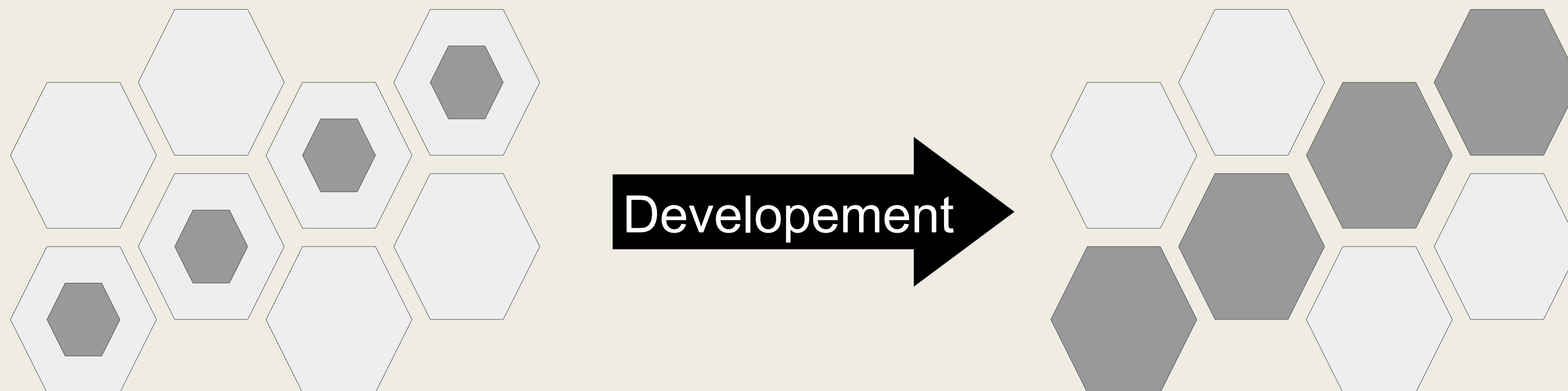
Step 0: Exposing

- Emulsion of silver halide crystals (silver salts (AgX), mostly AgBr)
- Light turns small part into metallic silver
- More light = more silver = darker developed film



Step 1: Developing

- Converts halides to elemental silver
- Only crystals with exposed nucleus

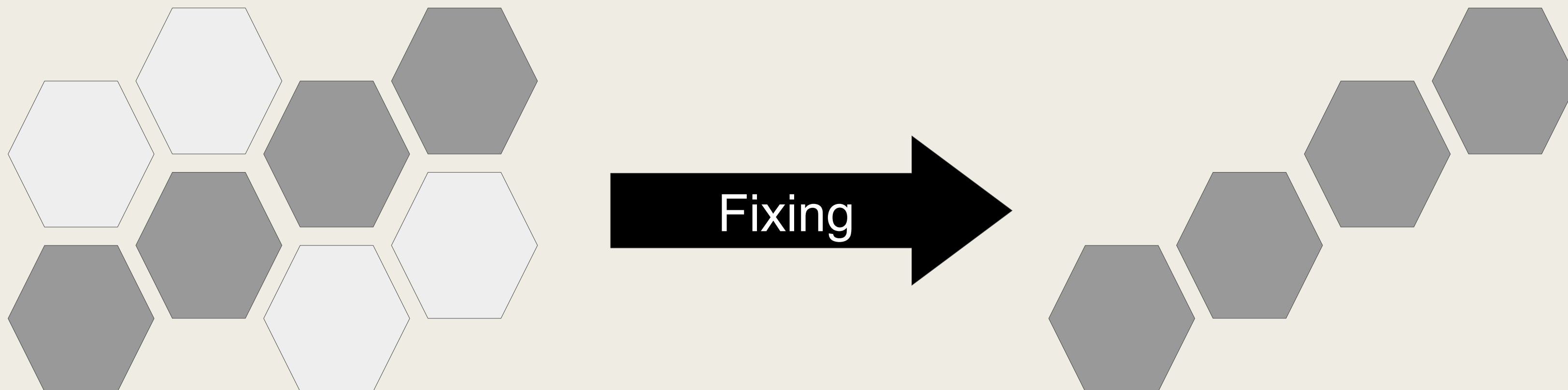


Step 2: Stopping

- Stops chemical reaction
- Distilled water works too

Step 3: Fixing

- Remove the remaining silver halide
- Film is no longer light-sensitive



Step 4: Finishing

- Rinsing the film
- Adding a film wetting agent
- Drying
- Scanning

CONCLUSION

It's almost over, don't worry.



A side note on movie-film

- Still common in the industry (e.g. Christopher Nolan, Quentin Tarantino)
- Certain film formats beat digital in resolution
- Difficult to shoot, process, edit, handle → expensive
- Processes for creating film lookalikes from digital recordings have been proven to work
 - Steve Yedlin for „Knives Out“(2019) <https://www.yedlin.net/OnColorScience/>

Why the #!?\$ would anyone do this?

- The Look
- The Feel
- The Inconvenience

The Look

- Film stock defines colours

Kodak Gold 200 →
Kodak Portra 160 →→



The Look

- Film stock defines colours
- Image texture/grain
- Digital noise != film grain

Ilford HP5+ →



The Look

- Film stock defines colours
- Image texture/grain
- Digital noise != film grain
- Lens imperfections
- Light artifacts (halation)

CineStill 800T →



The Feel

- Working with physical film feels different
- Actual image in your hand
- Mechanical satisfaction of film cameras

The Inconvenience

- Shutter release to final image takes time and work
- Limited amount of exposures on a roll forces you to make decisions
- Thinking about the image builds your style
- Mistakes are rarely correctable, so you will learn quicker

f1fth.com



„Fight less, talk more, say sorry sometimes.“ - Mikey Neumann