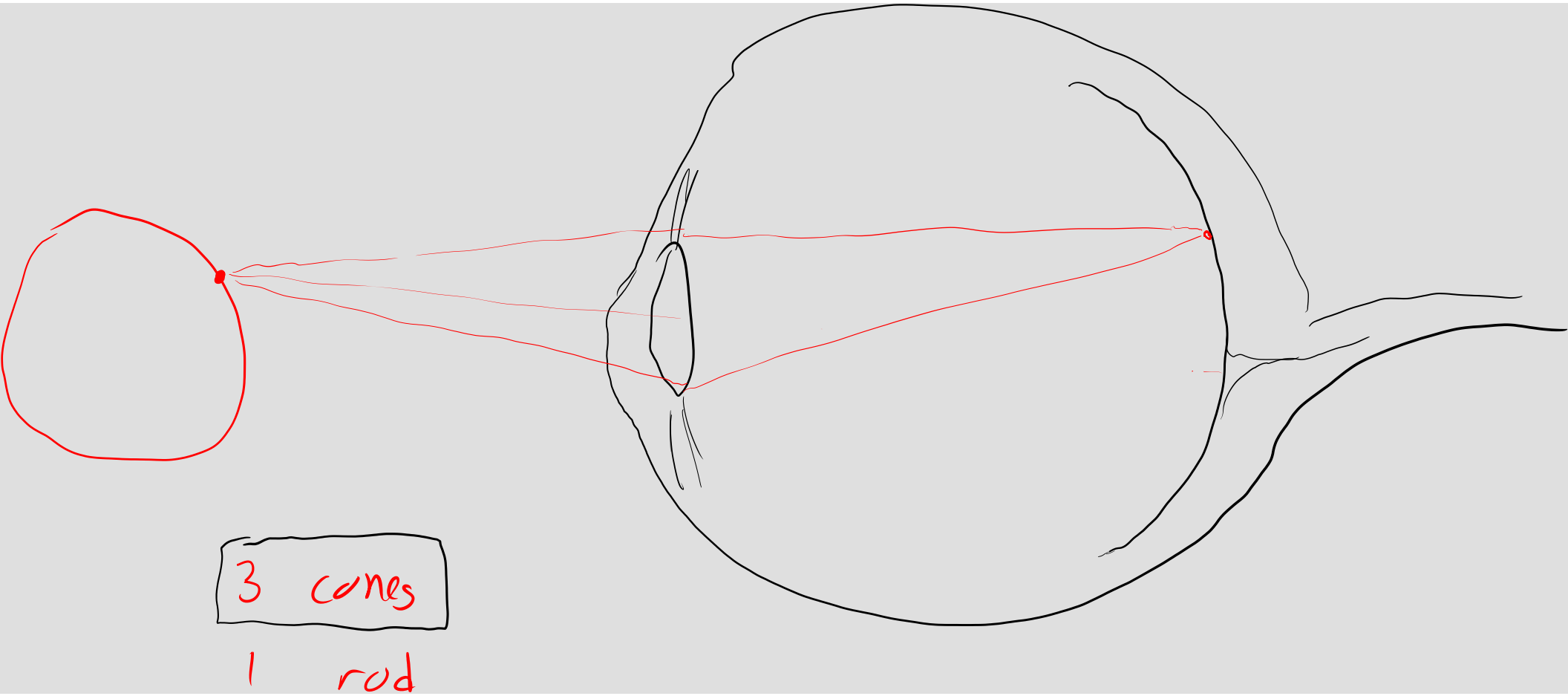
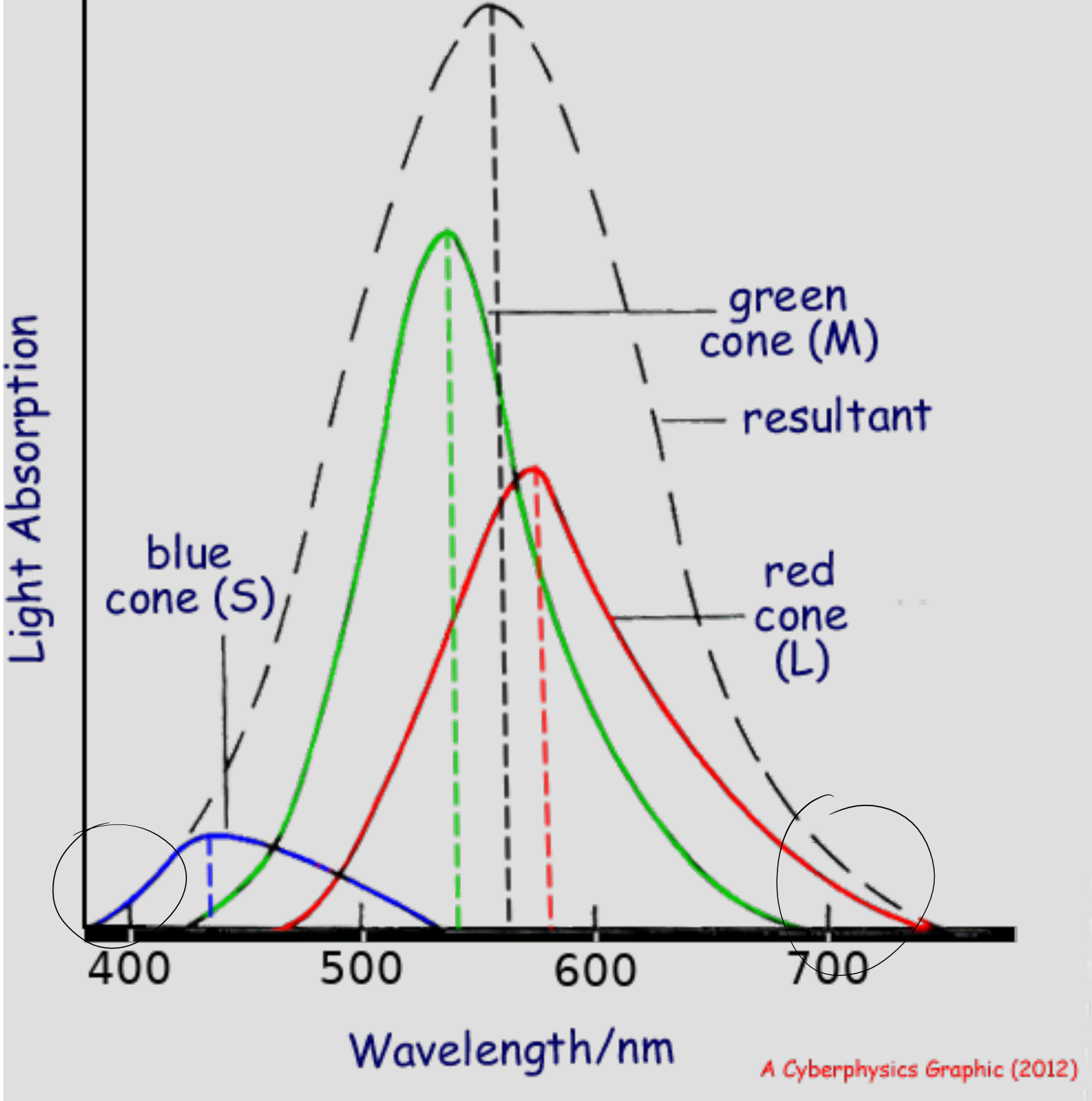
Color space vs model

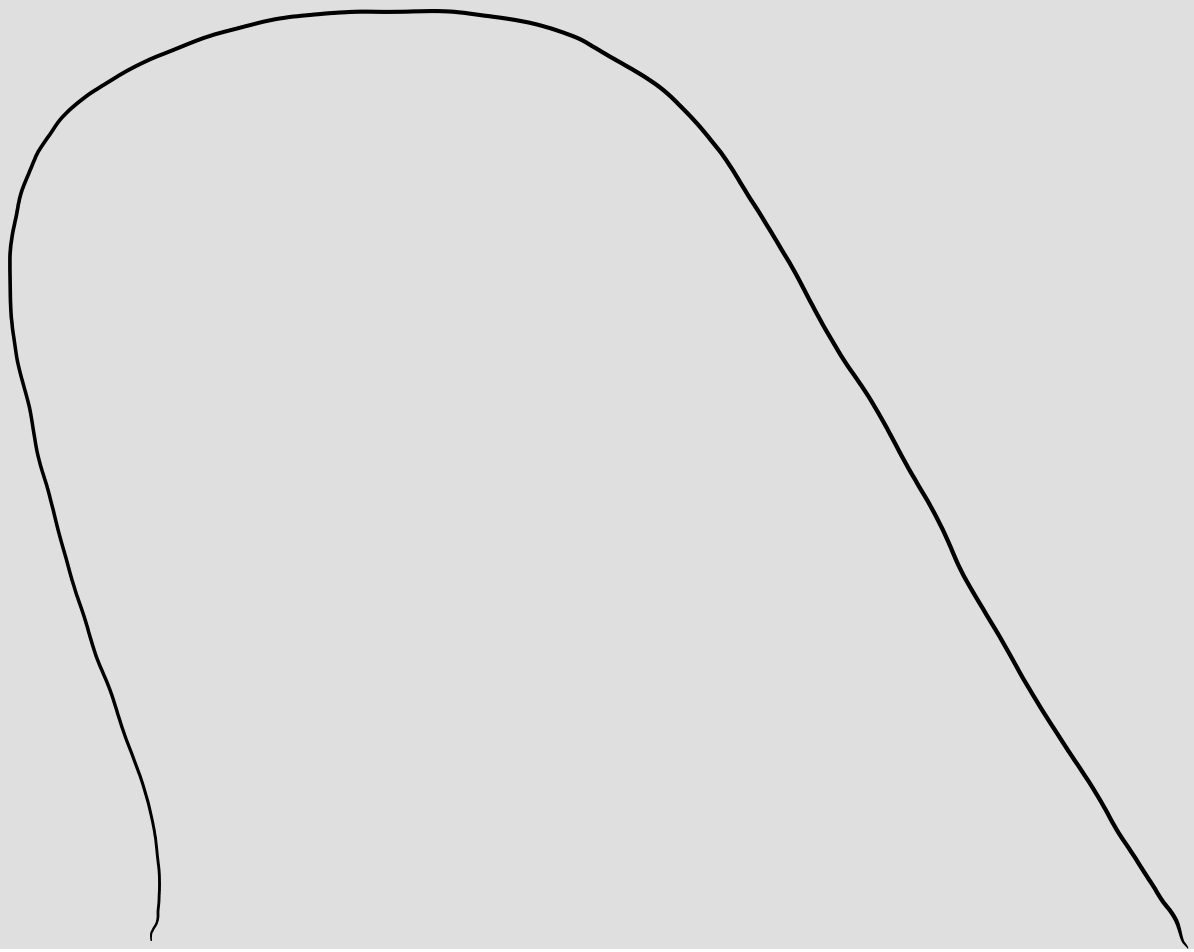
dither / halftone CMYK

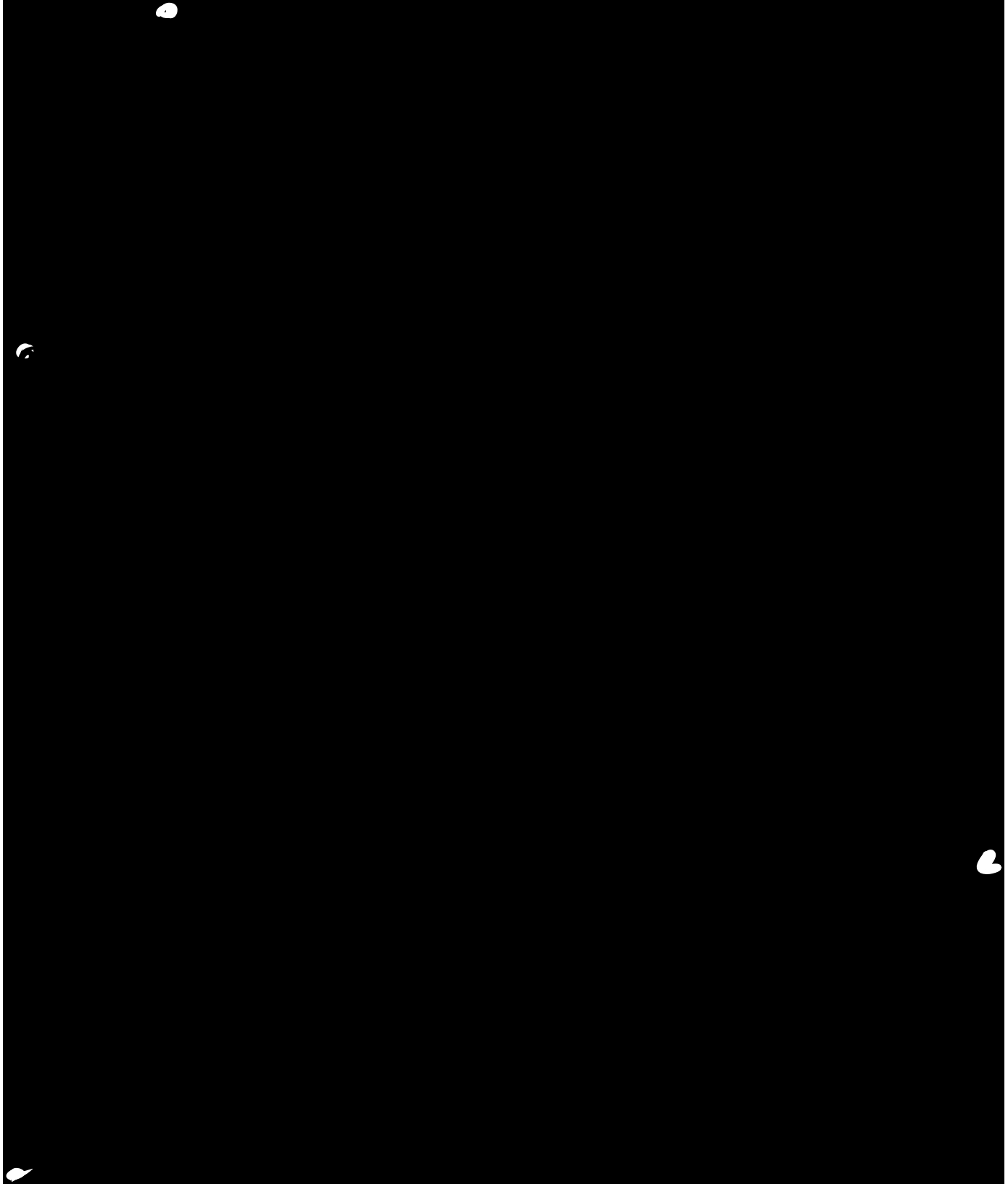
due date Q on Calendar

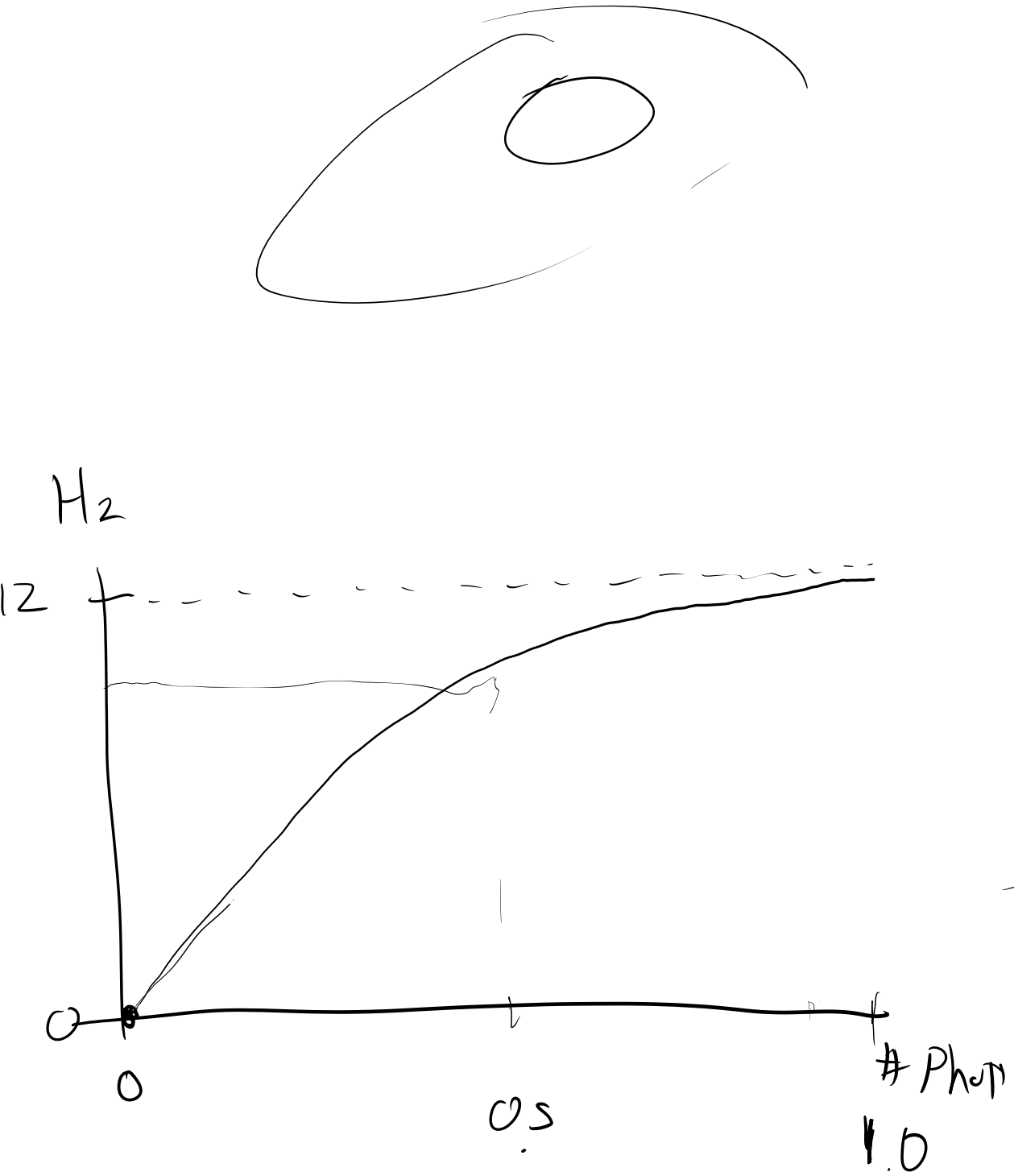

3 cones
1 rod

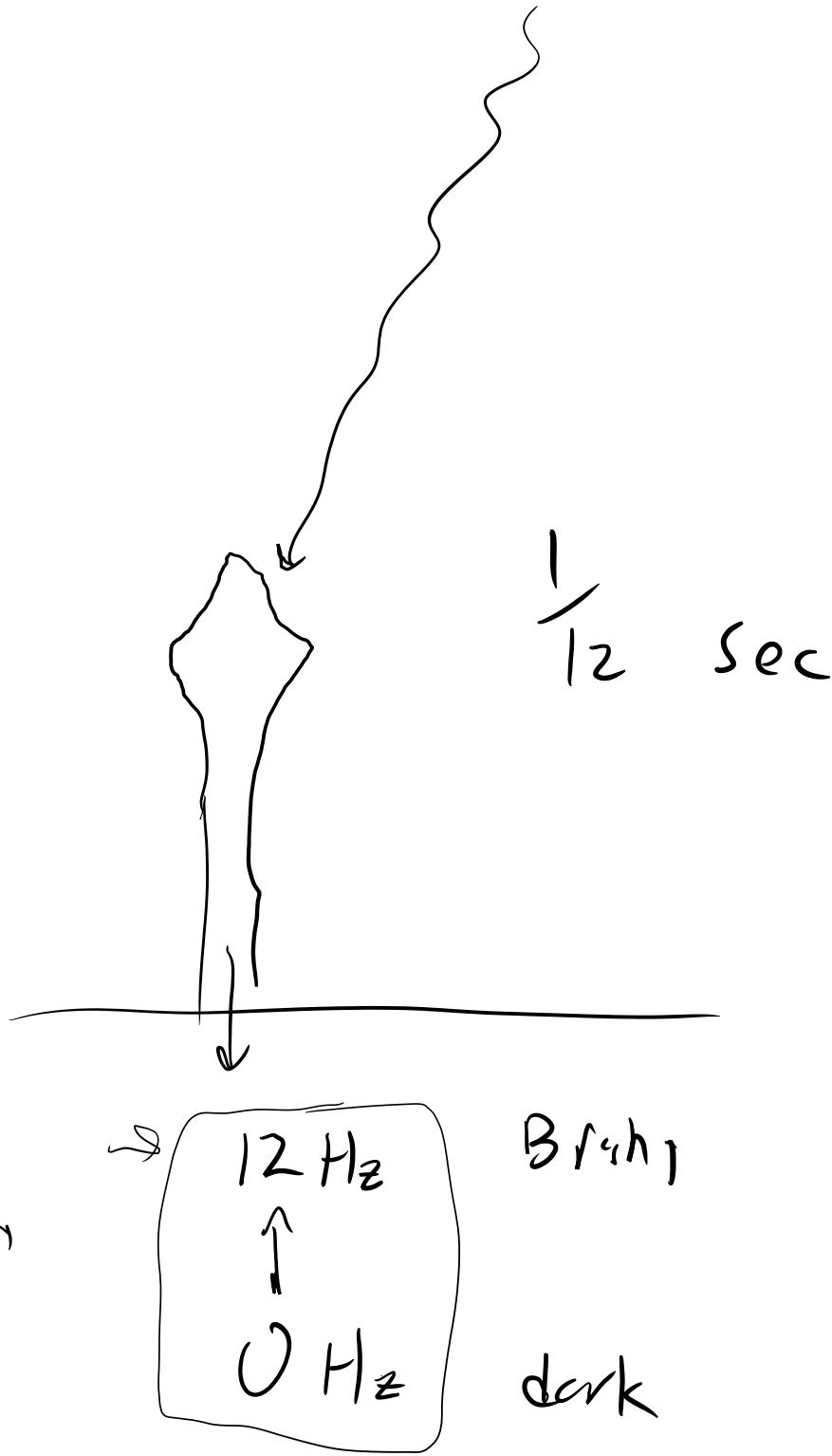

Light Absorption
blue cone (S)
green cone (M)
resultant
red cone (L)
400
500
600
700
Wavelength/nm
A Cyberphysics Graphic (2012)

What color do we see w/ Xmas light

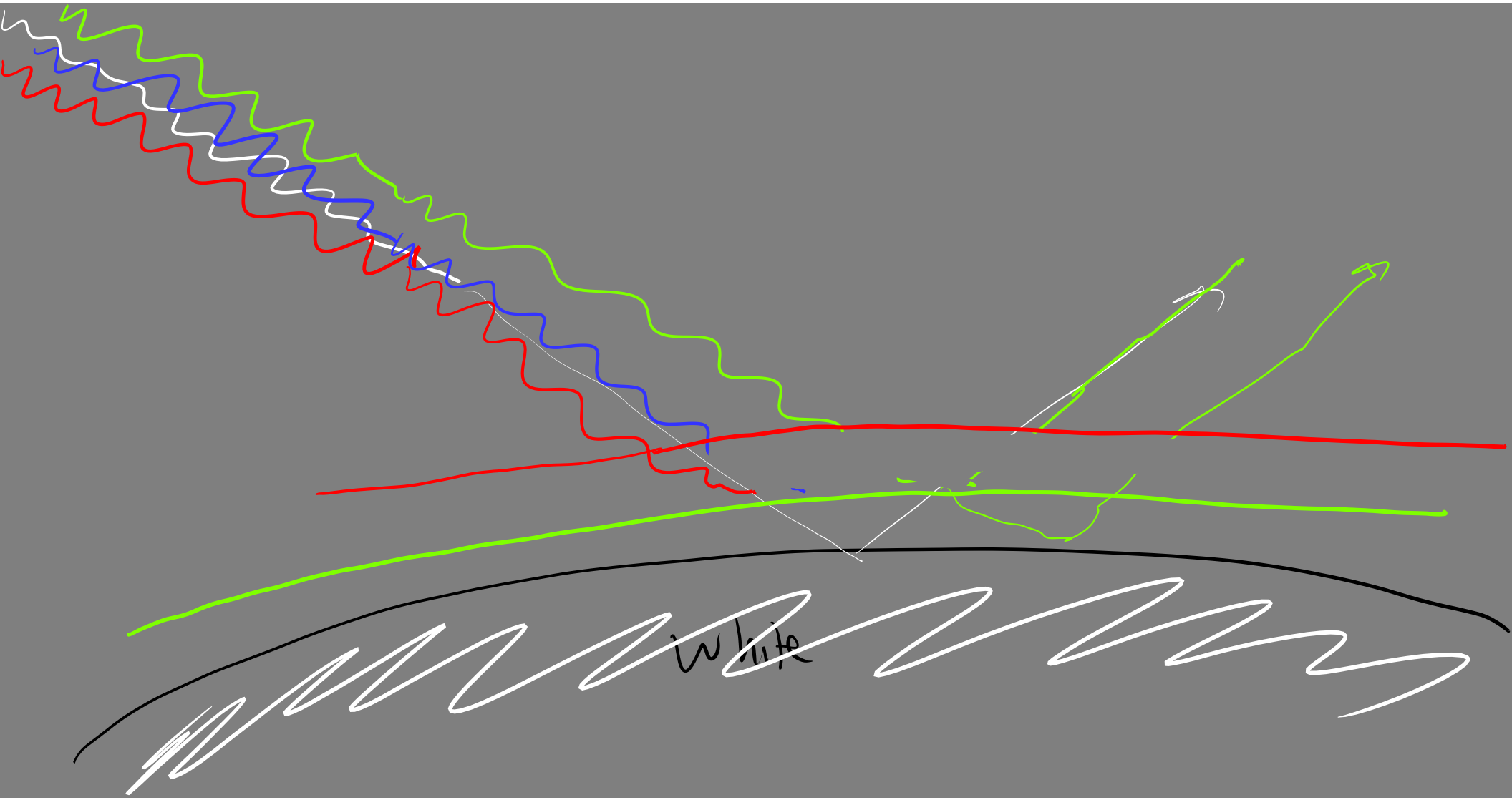


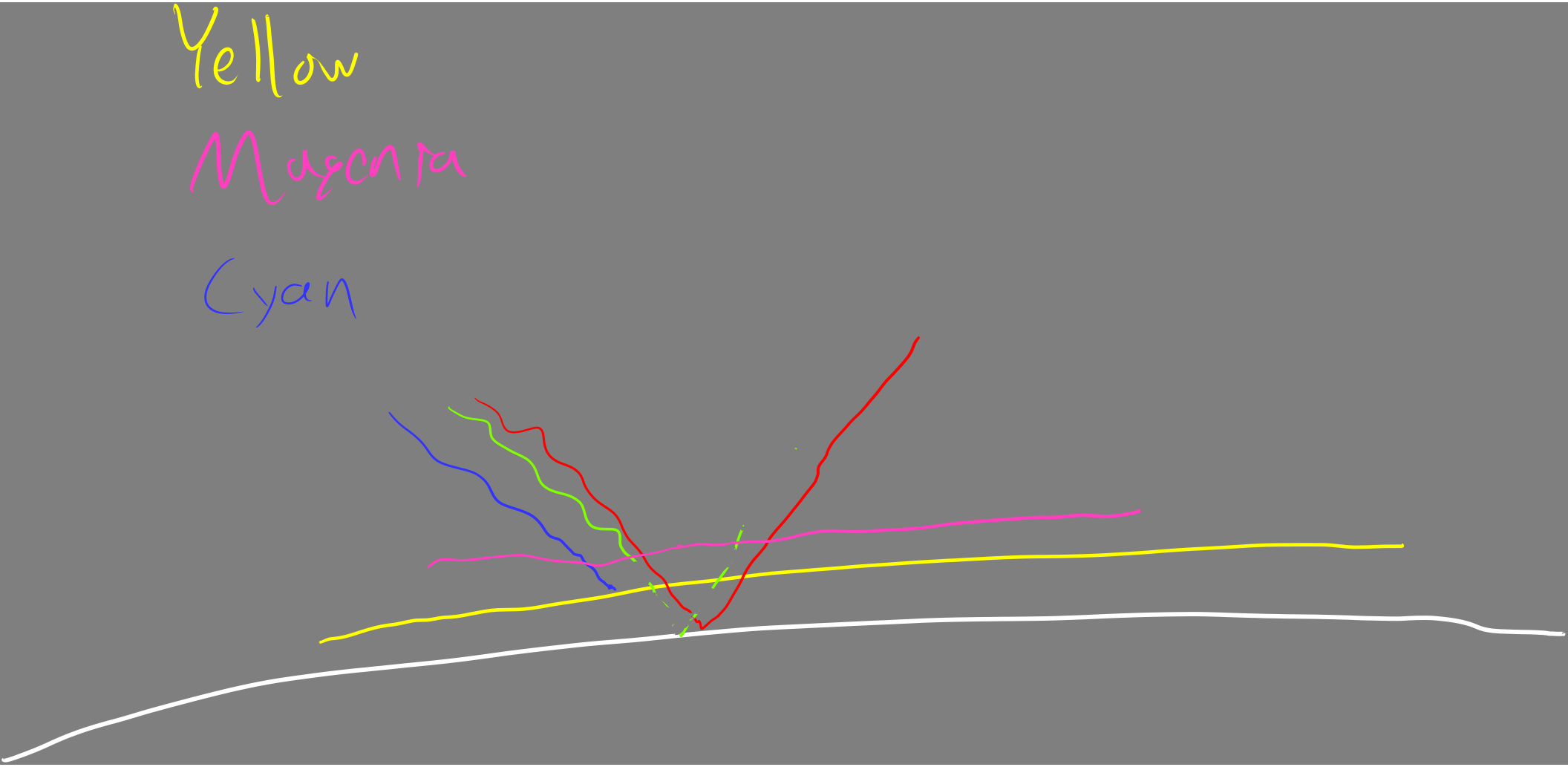



H2
12
0
0
0.5
Phot
1.0


1/12 sec
12 Hz
0 Hz
Bright
dark


hi
Red
hi
Yellow
green
middl
Orange


White


Yellow
Magenta
Cyan

Saturation
Hue
Lightness

Hue
Saturation
Lightness

Hue
Saturation
Lightness

Saturation
Hue
Value

Hue
Saturation
Value

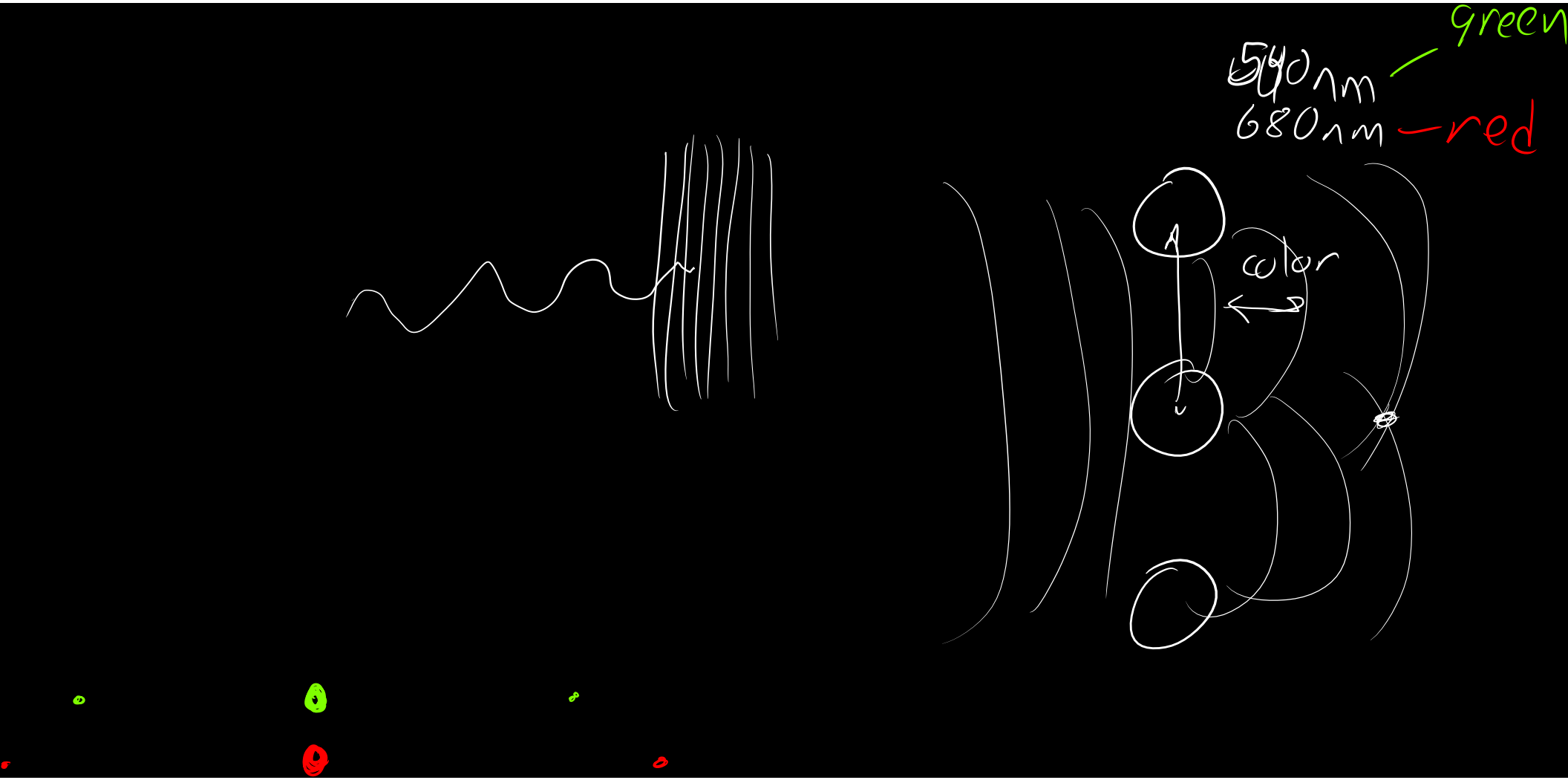
Hue
Saturation
Value

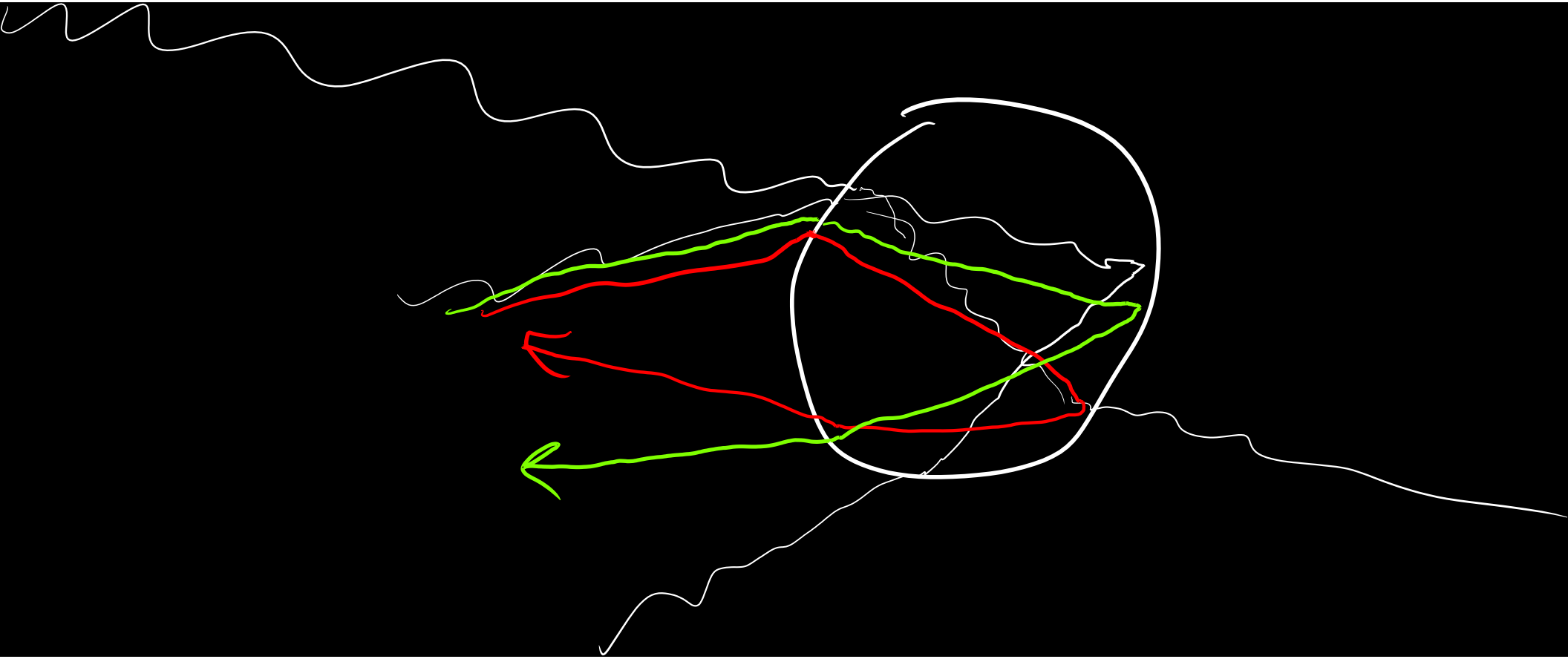
Blue
Red
Green
Cyan
Yellow
Magenta
B
R
G

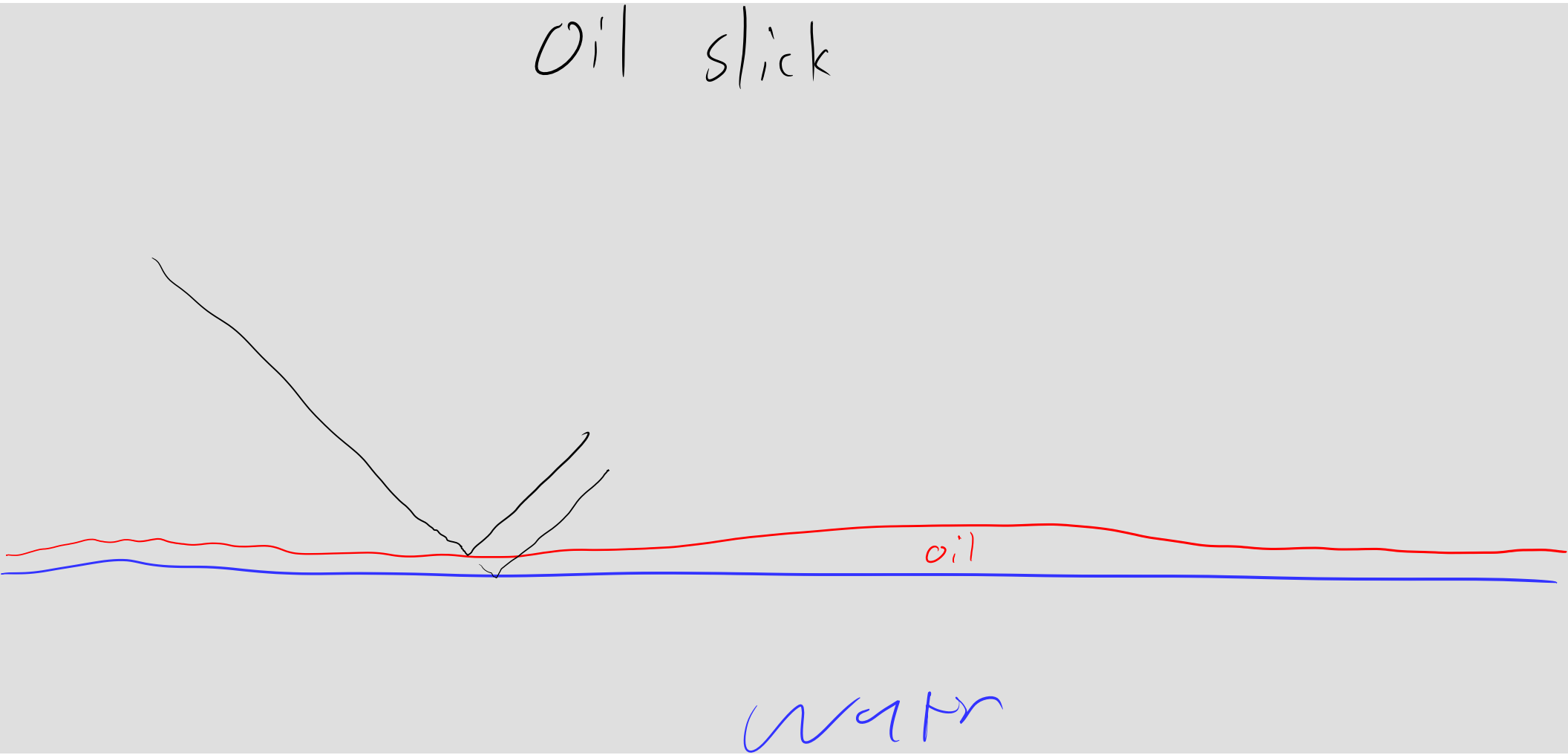
Hue
Saturation
Lightness

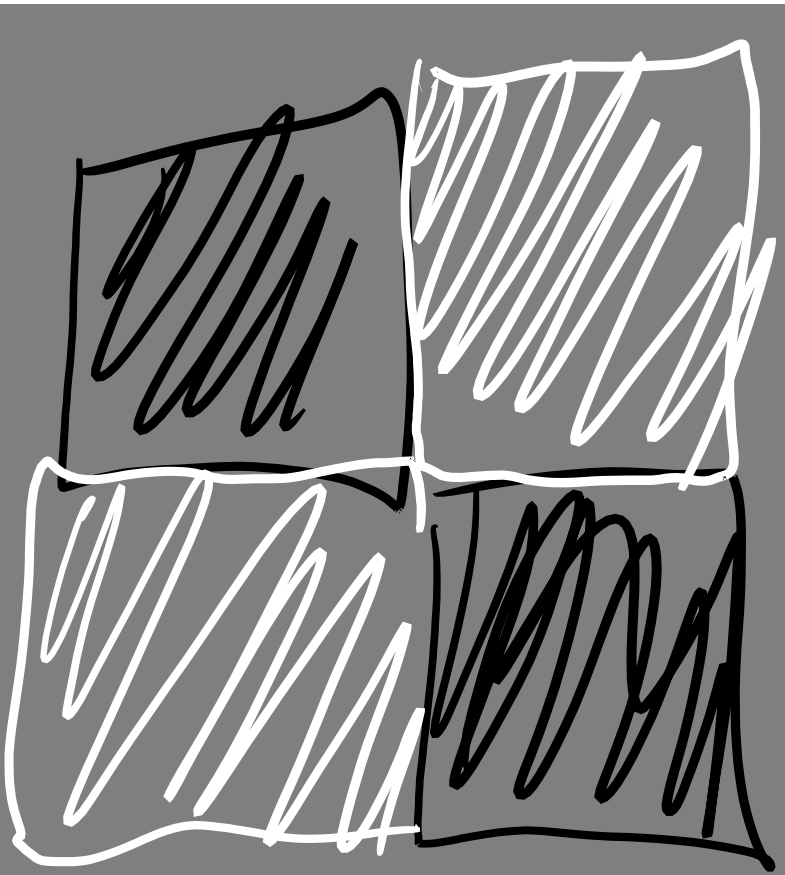
Hue
Saturation
Lightness

0-1	R	0-255
0-1	G	0-255
0-1	B	0-255

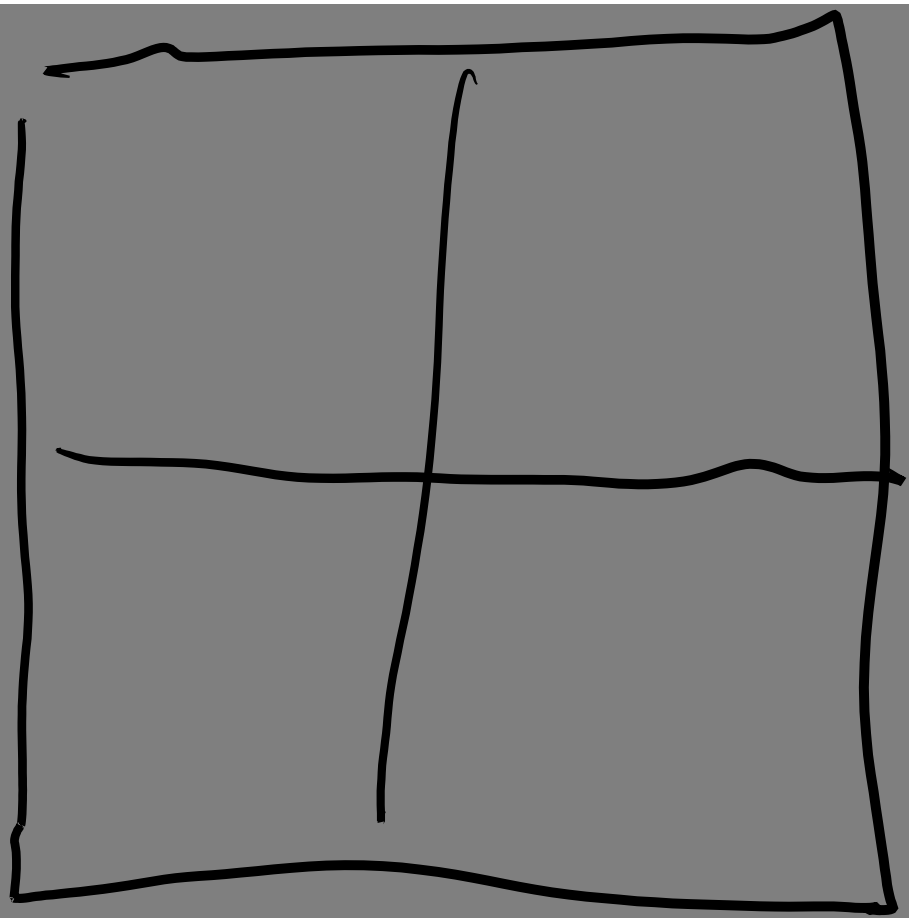

green
540nm
680nm
red
color



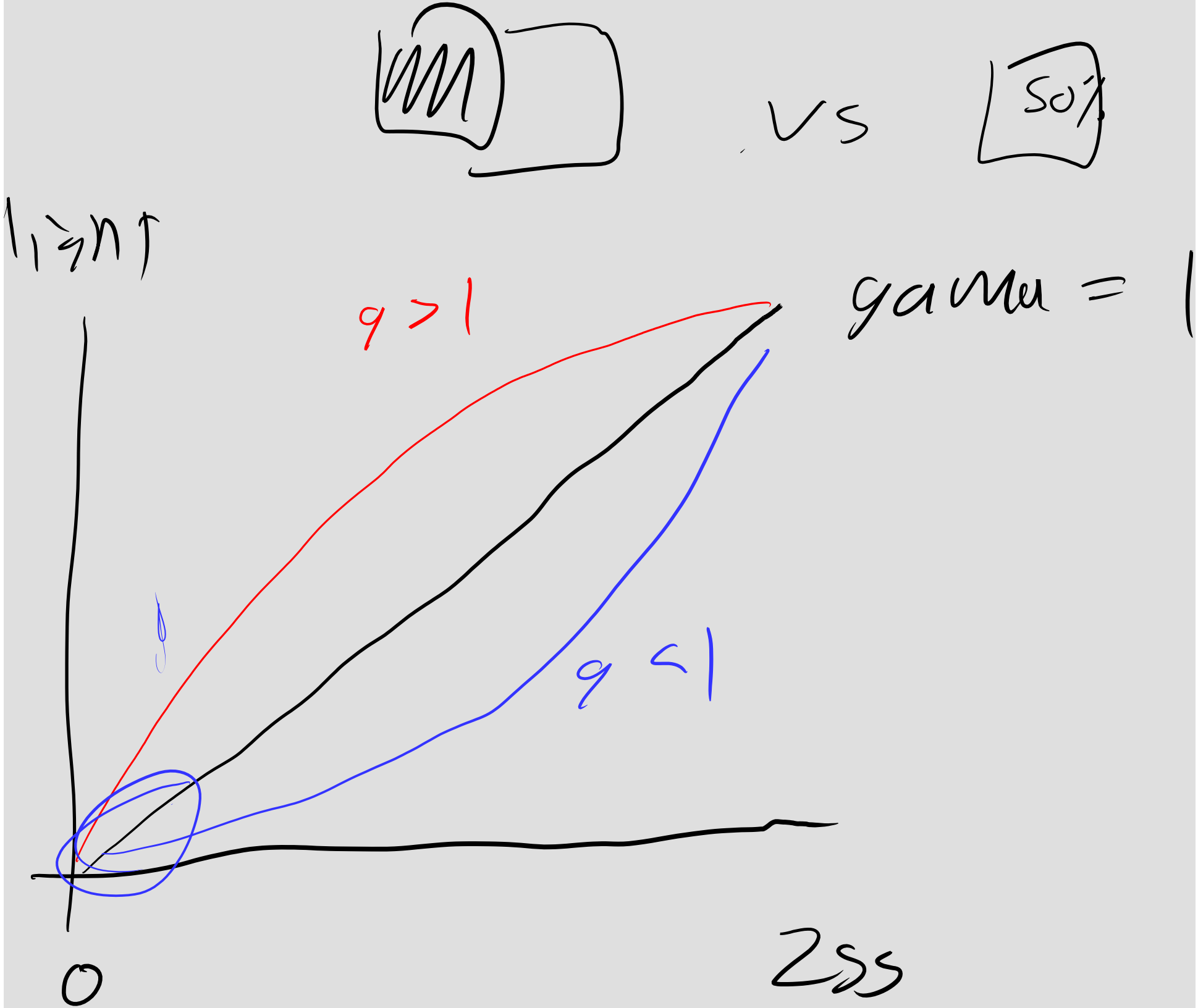

oil slick
oil
water

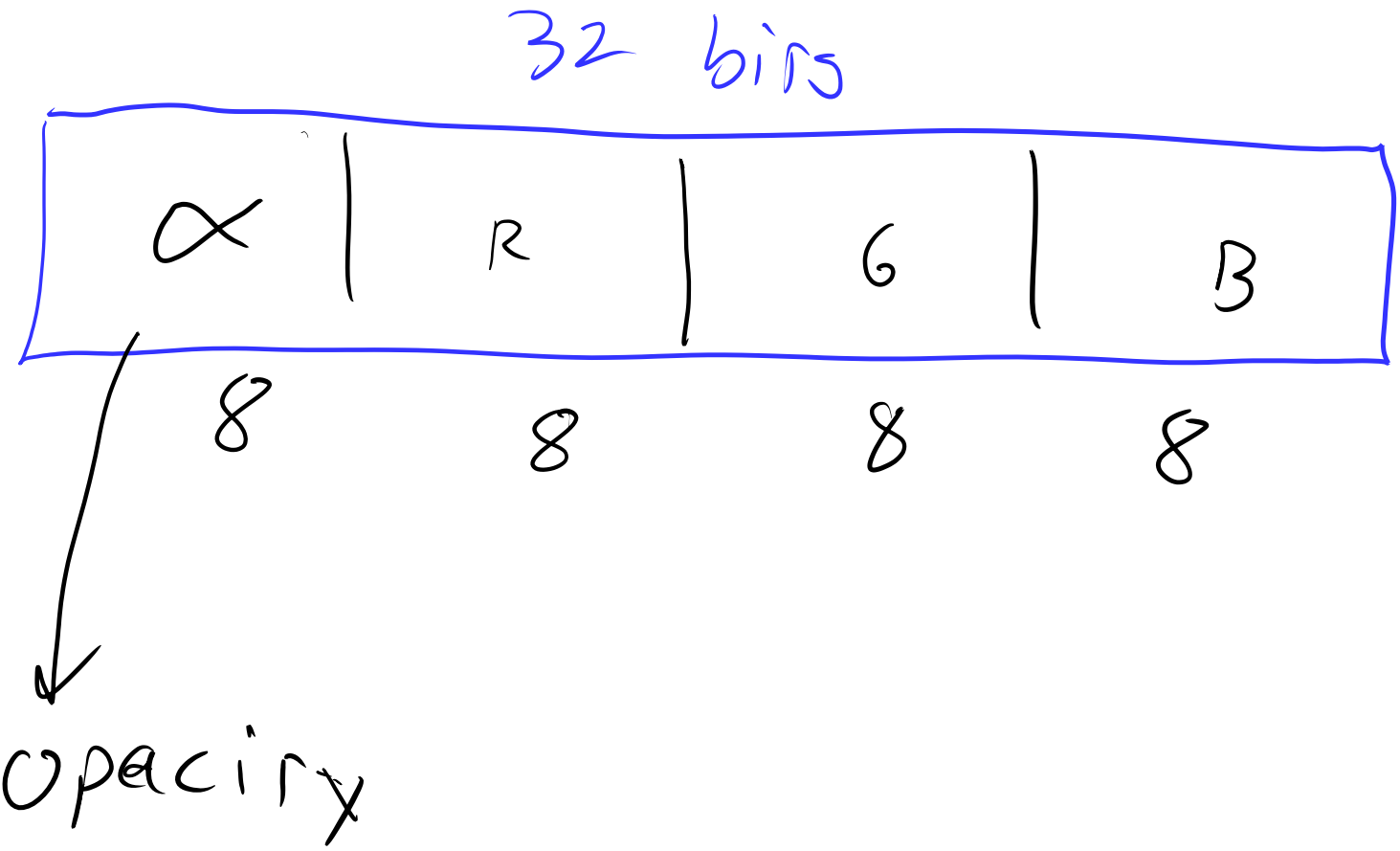


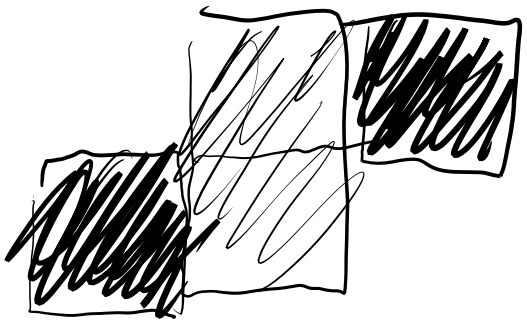
(1, 1, 1) (0, 0, 0)

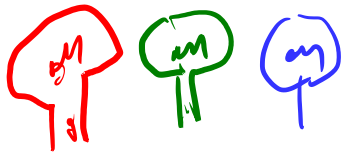


$\left(\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right)$


vs
Soft
light
q > 1
gamma =
q < 1
0
Zss

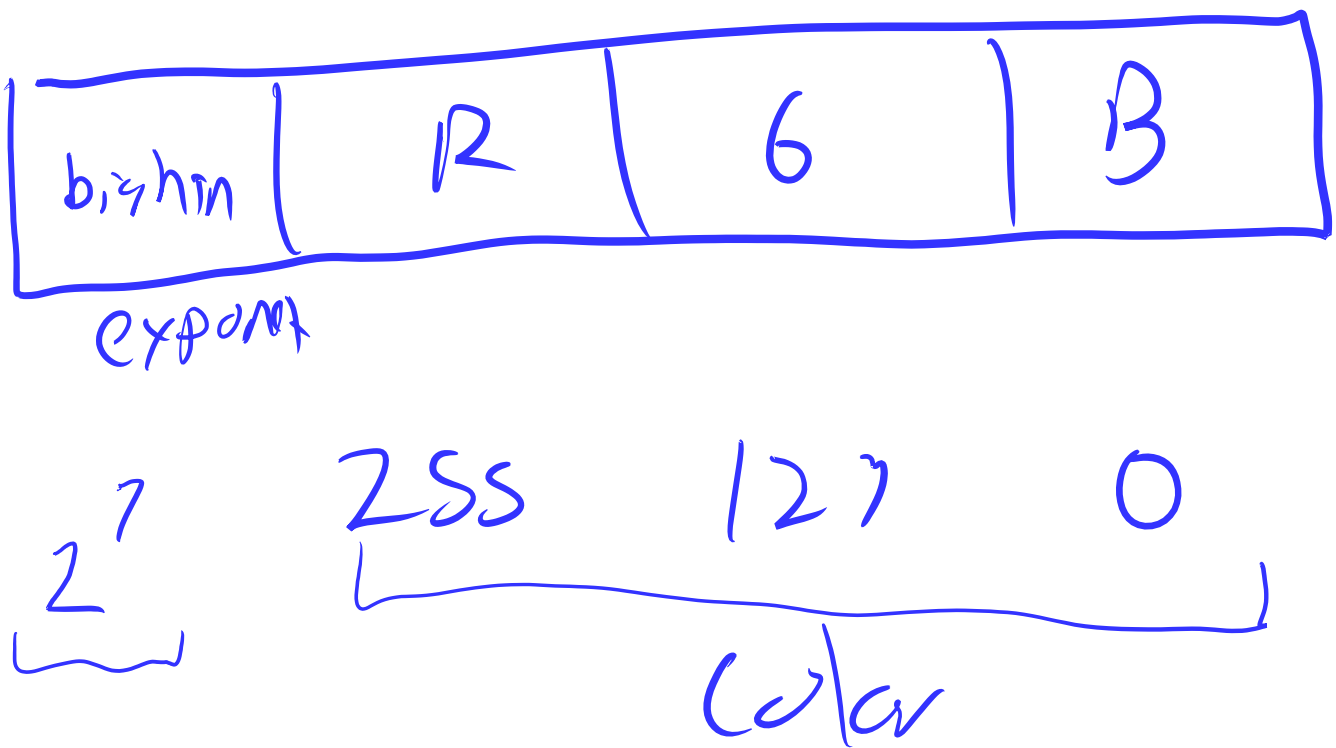

32 bits
α
R
G
B
8
8
8
8
opacity





HDR

High Dynamic Range



4 double —

$1920 \times 1080 \Rightarrow 2{,}000{,}000 \times 4\,B = 16\,MB$

$\times 4 \times 4$

$1080P \times 30\,FPS \times 1\,min =$

1800

100

$16\,MB \downarrow$

$32\,GB$

$3\,TB$

$24\,TB$

$\times 16$