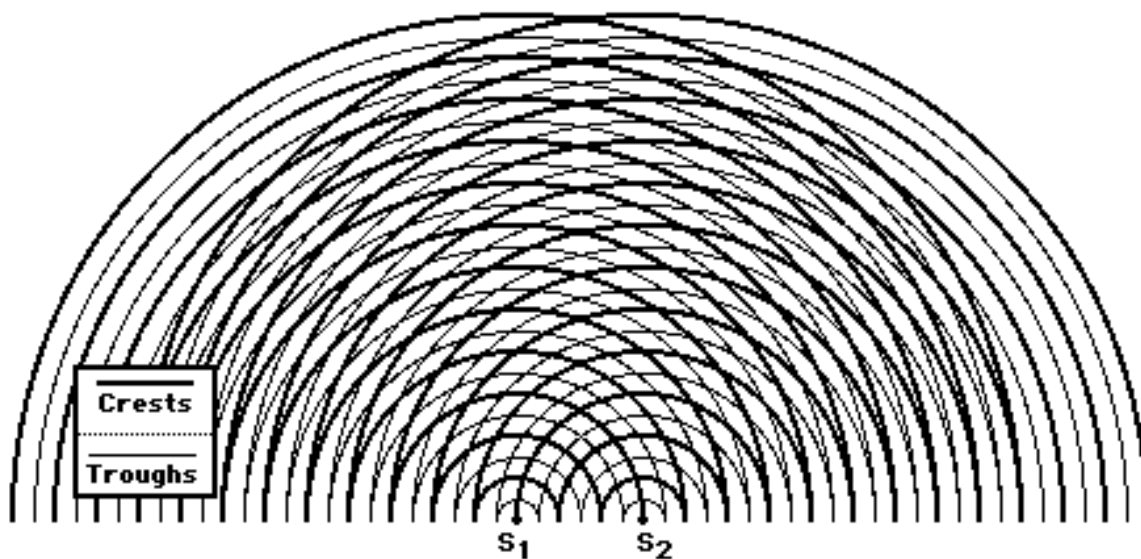# Light and Color - Lab Notebook Items

For the Ripple Tank Lab:

Tape the diagram and the data tables into the Data section of your lab.

Anti-Nodal Line	m	Point (labeled)	Distance from S_1 to Point in λ	Distance from S_2 to Point in λ	PD in λ
Central	0				
1st	1				
2nd	2				

Nodal Line	m	Point (labeled)	Distance from S_1 to Point in λ	Distance from S_2 to Point in λ	PD in λ
1st	0.5				
2nd	1.5				
3rd	2.5				

For the Two-Point Source Analysis Lab:

Tape the two tables below into the Data Section of your lab. You will also need to leave room in the Data section for a graphic to be handed out in class.

Pattern #	y (cm)	L (cm)	d (cm)	S_1P (cm)	S_2P (cm)	Ave. λ (meas.)

Show your work in the boxes below.

Pattern #	Measured PD from $|S_1P - S_2P|$	Calculated λ from $PD_{measured} = m\lambda$	Calculated λ from $\lambda = y\,d/m\,L$

For the Color Addition Lab:

Tape the information below into the Data Section of your lab.

Go to: http://www.colorado.edu/physics/2000/tv/colortv.html

What relative color intensities are needed in order to produce the color typical of the following objects?

a. yellow school bus   Red _____ Green _____ Blue _____

b. cyan sky   Red _____ Green _____ Blue _____

c. magenta ink   Red _____ Green _____ Blue _____

d. orange.....orange   Red _____ Green _____ Blue _____

e. milk chocolate brown   Red _____ Green _____ Blue _____

f. lavender flower   Red _____ Green _____ Blue _____

g. light pink rose   Red _____ Green _____ Blue _____

h. purple grape   Red _____ Green _____ Blue _____

i. navy blue Bear's jersey   Red _____ Green _____ Blue _____

j. forest green car   Red _____ Green _____ Blue _____

Come up with four of your own:

k. _____   Red _____ Green _____ Blue _____

l. _____   Red _____ Green _____ Blue _____

m. _____   Red _____ Green _____ Blue _____

n. _____   Red _____ Green _____ Blue _____

For the Painting with CMY Lab:
Tape the three tables below into the Data Section of your lab.

Team #1: Chicago Titans

Uniform Part	Desired Color Appearance	Required Paint Colors		
Helmet	Blue	**C**	**M**	**Y**
Skin	Magenta	**C**	**M**	**Y**
Shirt	Yellow	**C**	**M**	**Y**
Pants	Blue	**C**	**M**	**Y**
Socks	White	**C**	**M**	**Y**
Shoes	Black	**C**	**M**	**Y**

Team #2: Washington Knights

Uniform Part	Desired Color Appearance	Required Paint Colors		
Helmet	Red	**C**	**M**	**Y**
Skin	Black	**C**	**M**	**Y**
Shirt	Blue	**C**	**M**	**Y**
Pants	White	**C**	**M**	**Y**
Socks	Red	**C**	**M**	**Y**
Shoes	Yellow	**C**	**M**	**Y**

Team #3: St. Louis Fliers

Uniform Part	Desired Color Appearance	Required Paint Colors		
Helmet	Green	**C**	**M**	**Y**
Skin	Yellow	**C**	**M**	**Y**
Shirt	Green	**C**	**M**	**Y**
Pants	Yellow	**C**	**M**	**Y**
Socks	White	**C**	**M**	**Y**
Shoes	Black	**C**	**M**	**Y**

For the Filtering Away Lab:

Tape the table below into the Data Section of your lab.

		Appearance of Number						
		1	2	3	4	5	6	7
Color of Filter	None							
	Red							
	Green							
	Blue							
	Cyan							
	Magenta							
	Yellow							