We had trouble setting up the lights. One wouldn't go off and it was due to a problem with the microphone. Once we switched the microphone twice both began to work. Next we played with the graphing system to get a nice graph with two peaks. What we got was Fig 2 above. We weren't sure if this is what we wanted, because it doesn't have two well defined peaks. The next step would be to measure the light intensity detected by one light and seeing if it gives us a peak like in figure 1.

We also played with the camera set up and some of the times we were getting pictures that were too bright. We may have to adjust the flash placement.
On the computer program we set the program to record dashes at a very fast rate. One interesting thing is that when the rate is faster, the program won't run for as long.

We found it best to have 1 person, 1 picture taker and one person running the computer program.

To measure the speed of the tear:

You will be taking a long exposure shot where it is ~2 sec. During this time you will pop the balloon.

In order to measure the speed of the tear you need distance and time.

Time will be calculated by the light sensor. The two flashes are slightly staggered because they are triggered by two different microphones. The difference in time is very slight and it comes from the speed of sound. Because one microphone is placed farther than the other, it will go off at \( t = \frac{X}{\text{speed of sound}} \) apart.

It is a very small time and will be of the appropriate magnitude to measure the speed of the tear.

It is important to select an appropriate distance...