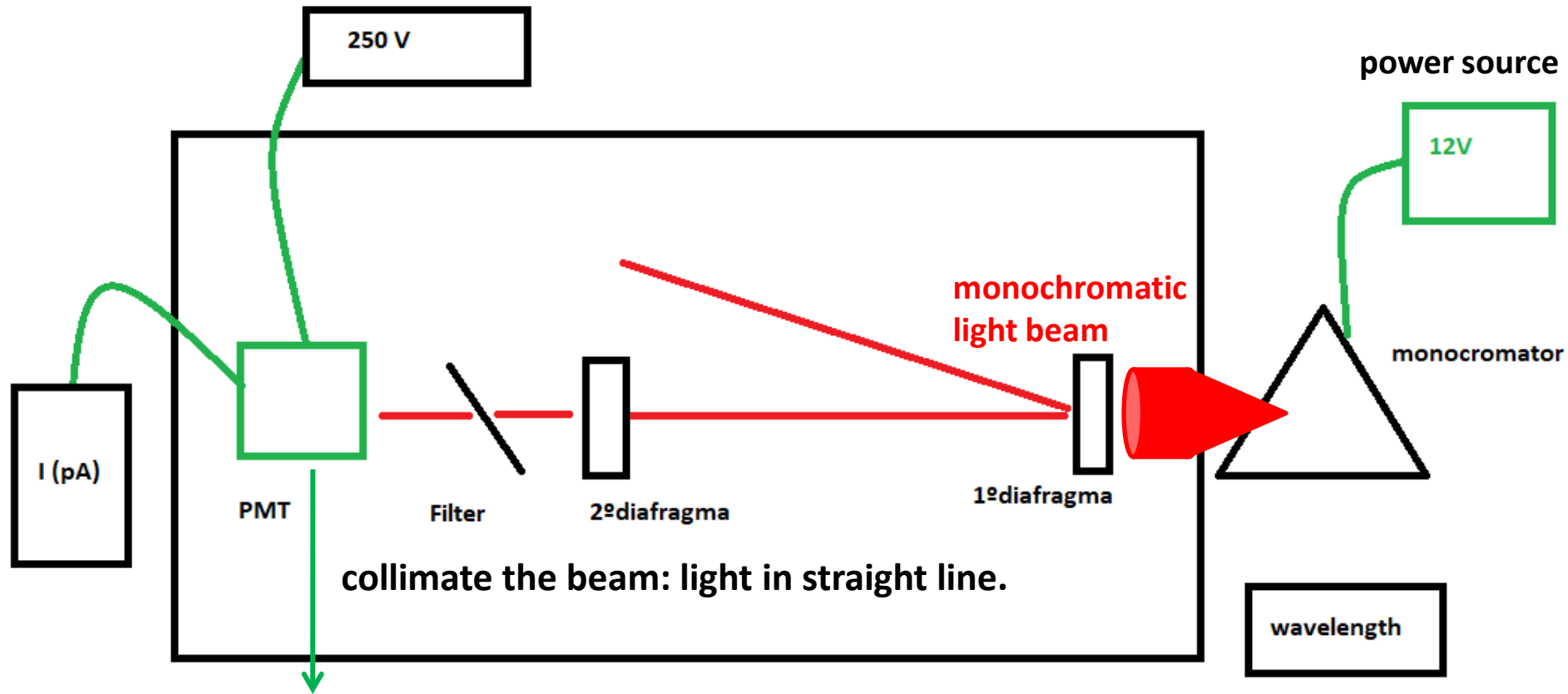


Measurements with Dichroic Filters

07/04/2022

University of Valencia, IFIC

Set up and procedure

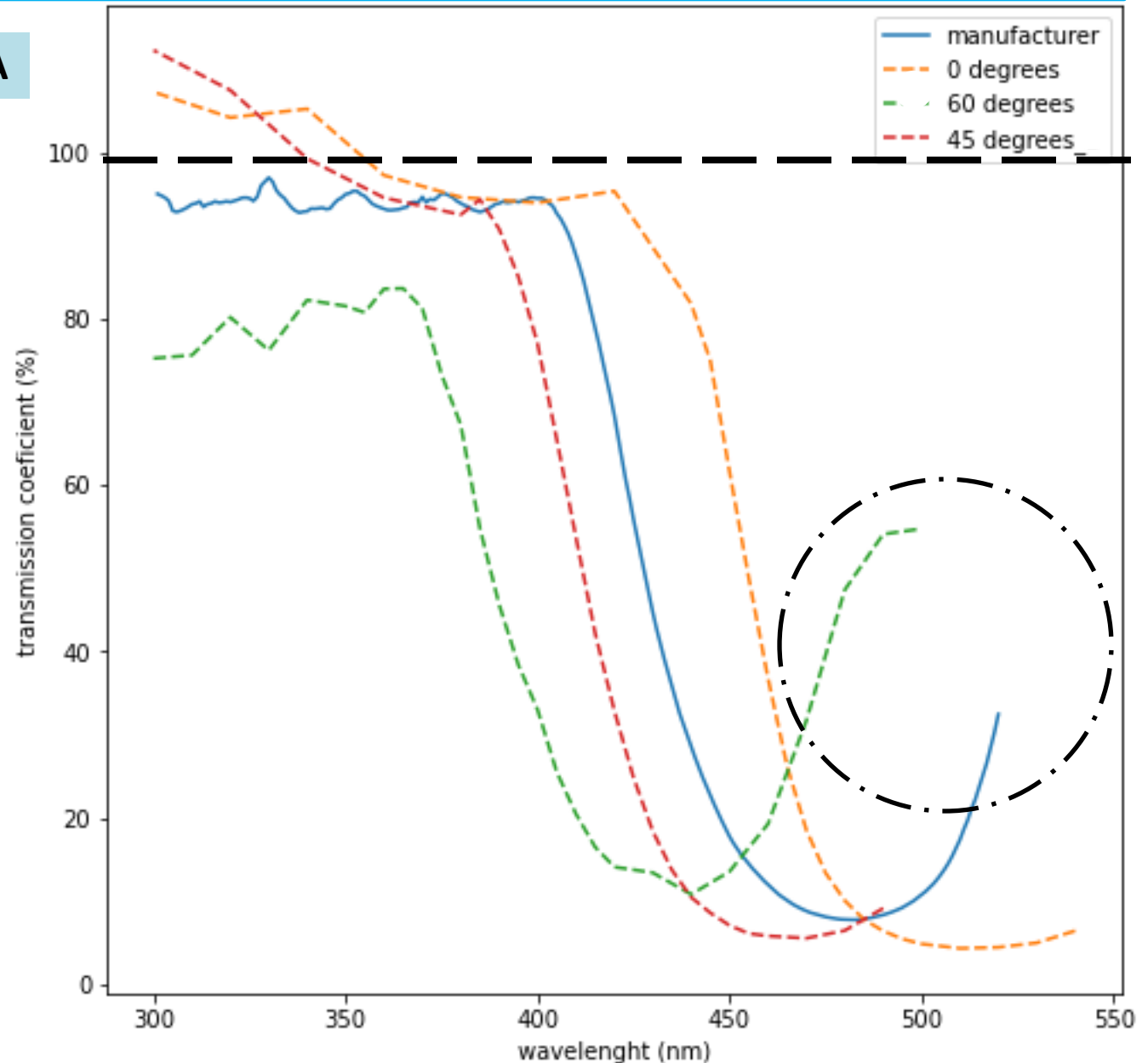


The light arrives to the surface of the dichroic filter. We can see which wavelengths pass across the filters and which not because we can change in the mococromator the wavelength and therefore we are testing the ability of the dichroic filter

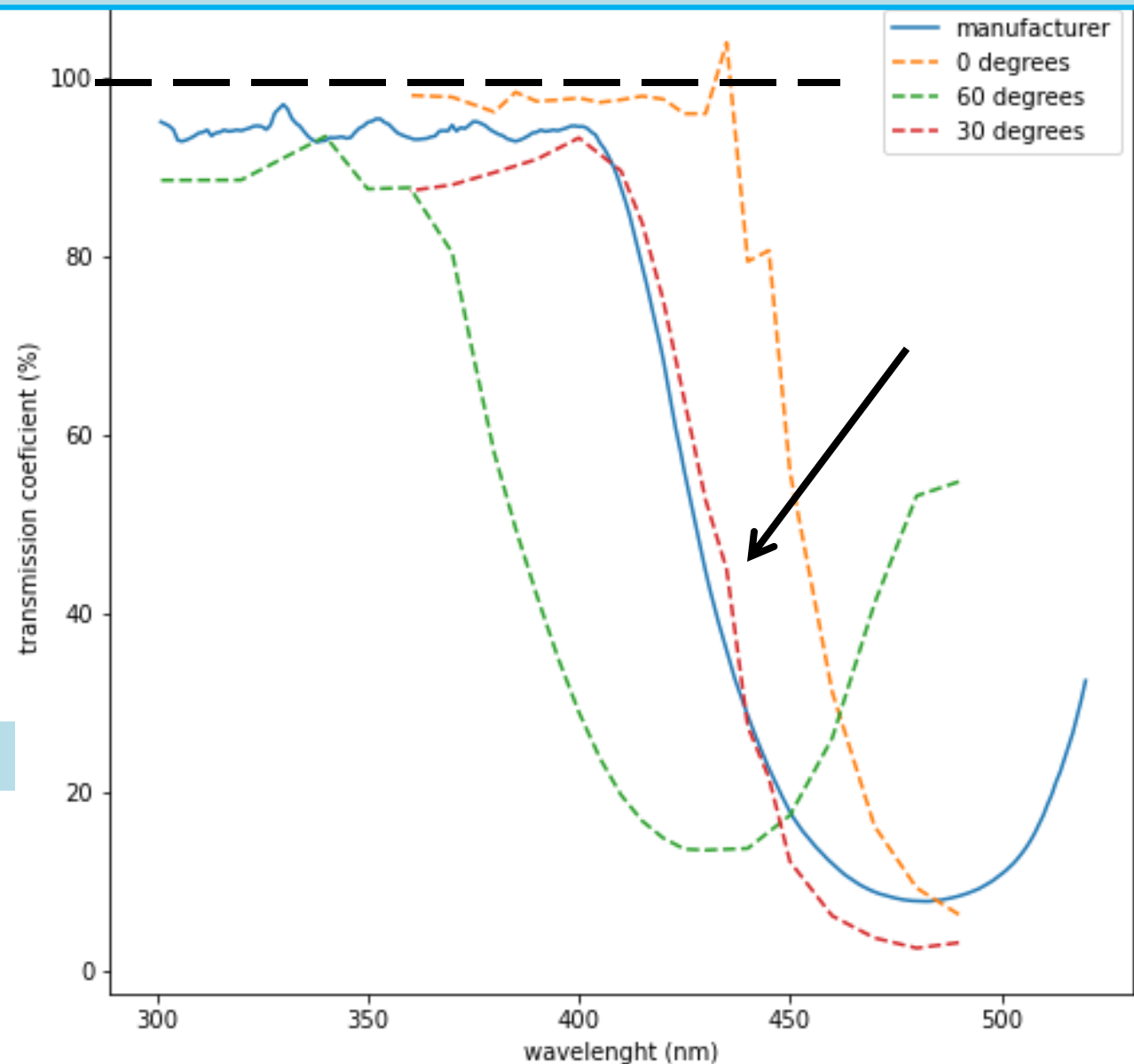
Detect the light with the PMT detector: photoelectric effect takes place → intensity

Transmission coefficient of the first filter in function of the wavelength

Dark Current: 140.4 pA



Transmission coefficient of the second filter in function of the wavelength



Dark Current: 140.4 pA

Preliminary results

Degrees	FILTER 1	FILTER 2
0	?	
30		
45		
60		

Why there are so much oscillations in the intensity when we walk or move near to the PMT?

Today we have measured that the Dark current is zero but yesterday we measured 140.4 pA.

Conclusions

- We don't have good measurements for all angles and filters.
- Some of our 'good' measurements have a certain degree of discrepancy in comparison with what we were expecting.

Therefore what we have to do now...

- To understand well the lamp: how it changes with the conditions in the lab.
- Julio and Marta have taken measurements of the two filters at 45 degrees but using lenses instead of two diaphragm and they have obtained similar results.

grafica

