



FACULTÉ DE SCIENCES ET GÉNIES

HOWTO - Change PMT

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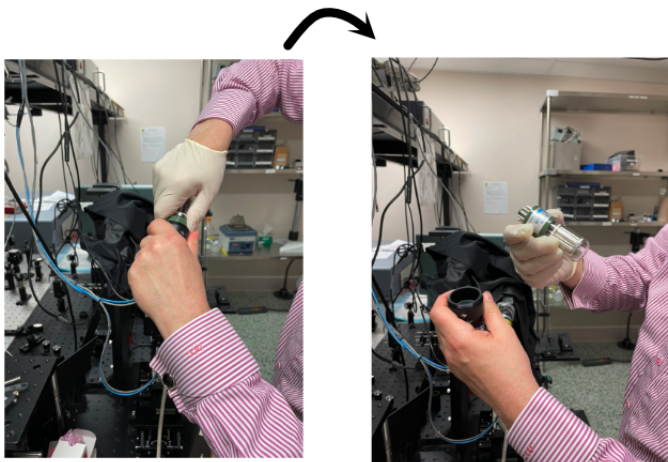
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The PMTs are in a beige shelf in the middle corridor. All PMTs that we have are from Hamamatsu. They are all the same thing. We keep even the old ones even though they are old, just in case we need to test a few things in the future. So do not put your old PMT in the trash! Put it in any PMT box and write a few info on it such as the date, your name, and where it was.

The socket is the black cylindrical thing around the PMT.

1. Make sure that the PMT box is turned off.
2. Disconnect the cable of the socket from the acquisition box.
3. Take off the aluminium foil around the PMT.
4. Disconnect the only wire on the socket from the metal notch simply by pulling on it.
5. Put gloves on.
6. Remove the socket by unscrewing it. The PMT should come with it, inside of the socket.
7. Remove the PMT from the socket by unscrewing and pulling carefully.

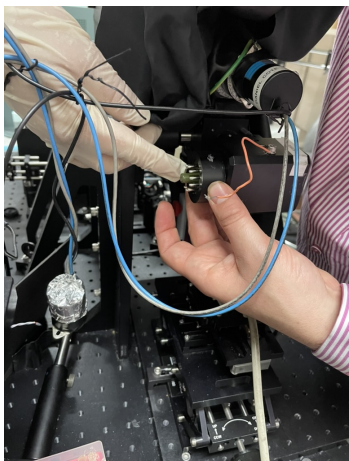


8. Note the part number (R...) and the date of the PMT on its new storage box. Put the old PMT in its new storage box.

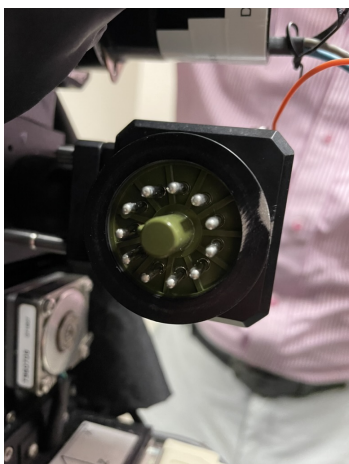


9. There is a black ring of about 1.5" of diameter and 1" of length with the socket. Put the ring on the

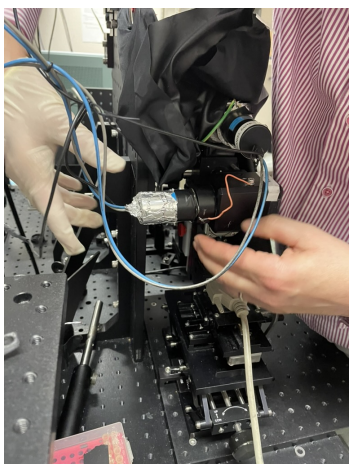
new PMT and insert the new PMT in the PMT holder of the microscope.



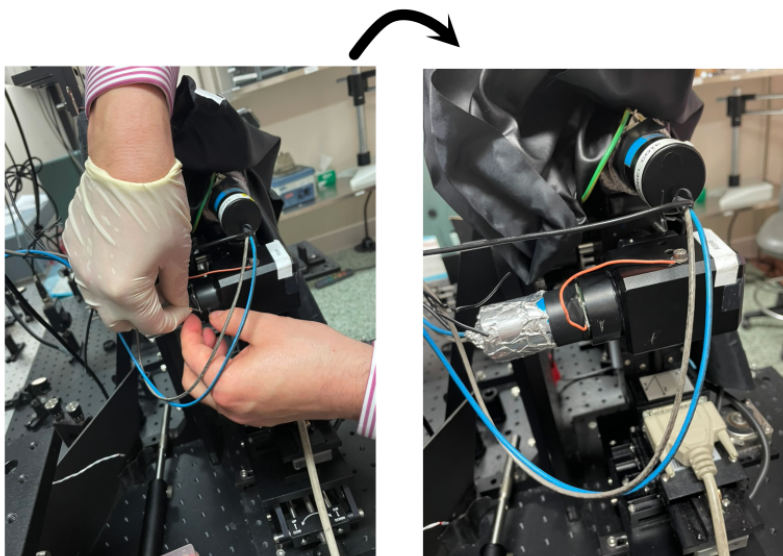
10. Make sure that the entrance of the PMT is facing the emission path. A little notch on the PMT indicates where the entrance is. Put the notch so that it is aligned and facing the emission path.



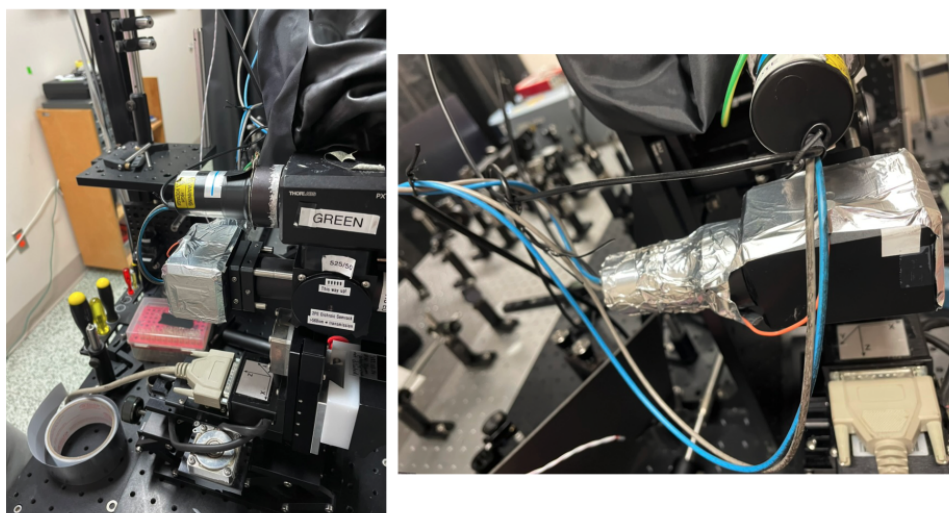
11. Put the socket back on.



12. Connect the cable back simply by wrapping the wire around the metal notch.



13. Wrap the socket and the PMT holder with aluminium foil. Make sure that the aluminium foil touches everything, even the cracks between the components.



14. Reconnect the cable from the socket to the acquisition box.
15. You are done! You will be able to evaluate your work by imaging a sample you know well. You might need to change the angle of the PMT a little to optimize the collection of photons. If you see a lot of non-random noise when imaging, the PMT is simply not good anymore. Change it for another one. Bravo!