

## Photomultiplier tests (DRAFT)

The purpose for these tests is to understand and study the behavior of the PMTs when they are irradiated with UV light.

The tests will be of different kind. First we will characterize some PMTs, dark current evolution and gain. After the characterization, with the PMT's HV off, the tube are placed under the UV lamp (distance and time to be determined). Then, we repeat the same measurements.

In the next phase, the PMTs will be placed under UV light, but with HV on (low power) (time and distance to be determined). Again, we measure the dark current evolution and gain (out of the UV lamp).

Finally, and in case the PMTs could recover to the initial stage, we will place the PMTs under the UV light but behind a non-radiated lead glass bar, repeating the whole measurement process as before.

The test with the use of lead glass bar could introduce some variations and extra comparisons. For example, measure the signal with the same HV level as was tested without lead glass. It could give some indications of how UV light is absorbed within the glass. Of course the transmission will be measured in detail with Zorn's equipment.