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PMT measurements in Antares

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The comparison of the simulated to the real data in the Antares experiment is very important to understand the detector behavior. The observed differences in the charge distribution of the background hits, in the K40 coincidence rate in two adjacent optical modules and in the hit residual time distribution have been investigated both by a more detailed description of the PMT and by a dedicated series of measurements. The understanding of these effects has reduced the discrepancies and improved the analysis quality. The effect of late pulses, after pulses and angular acceptance have been taken into account or corrected. Measurements of these parameters have been carried out using Antares PMTs and optical modules while a more detailed simulation of the angular acceptance of the Antares optical module has been performed. The results of these studies are presented.

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