

Abstract Submitted  
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**The Photomultiplier Calibration Procedure for the DarkSide Dark Matter Program** JASON BRODSKY, Princeton University, DARKSIDE COLLABORATION — The charge calibration of the photomultiplier tubes in the DarkSide-10 dark matter detector prototype is carried out by measuring their response to small numbers of photoelectrons induced by a pulsed laser. This calibration requires fitting the observed charge spectrum to a function that accurately describes the behavior of the photomultiplier tube. Based on previous external work, I have developed a fitting function that is robust against a class of non-ideal photomultiplier responses. This fitting function improves on the previous work by fully accommodating “pedestal” noise, reducing the need to introduce potentially biasing noise-reduction measures.

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