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Modeling the low-light response of photomultiplier tubes PATRICK MAXWELL, IOANA NICULESCU, James Madison University — A number of crucial experiments exploring the intricate tomography of protons and neutrons will be carried out in Hall A at Jefferson Lab using the SuperBigBite Spectrometer (SBS), a large acceptance magnetic spectrometer sporting 0.5% momentum and 0.5 mr angular resolution. As part of the standard SBS detector package the **G**as **R**ing **I**maging **CH**erenkov (GRINCH) detector will help identify particles produced in the experiments. To determine which photomultiplier (PMT) tubes would be used in GRINCH, more than 900 29mm 9125B PMTs were tested. Two models, Bellamy et. al. (NIM A **339** (1994)) and Dossi et. al. (NIM A **451** (2000)) were used to fit test data. For the parameters relevant to this study, results from both models were found to be equivalent, and will be discussed here.

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