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**Transit-time Mapping of Photomultiplier Tubes** NIRDOSH CHAPAGAIN, J. BART CZIRR, LAWRENCE B. REES, MICHAEL J. WARE, Brigham Young University — Photomultiplier tubes are used in various experiments in conjunction with scintillators to detect ionizing radiation. BYU nuclear physics group has been using different models of photomultiplier tubes for their neutron detection research. Motivated by the neutron detection experiments at BYU we have developed an experimental setup to map the transit-time difference and intensity difference as a function of the position of the photocathode illumination. I will present an overview of the set-up and preliminary results for an ADIT (B133D01S) photomultiplier tube. The accurate understanding of the transit-time difference is very useful for neutron time of flight experiments.

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