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Scintillation Studies of the Mouse Mammary Tumor Virus with <sup>125</sup>I<sup>1</sup> AMIR YAZDI, ERIC BLUE, ERIC BRADLEY, STAN MAJEWSKI, SHIRA MOHAMMED, JIANGUO QIAN, MARGARET SAHA, STEPHEN SCHWORER, JONATHAN SUTTON, ANDREW WEISENBERGER, ROBERT WELSH, THE COLLEGE OF WILLIAM AND MARY DEPARTMENT OF PHYSICS TEAM, THOMAS JEFFERSON LAB DETECTOR AND IMAGING GROUP COLLAB-ORATION, THE COLLEGEOF WILLIAM AND MARY DEPARTMENT OF BI-OLOGY COLLABORATION — We have applied the techniques of scintillation imaging to studies of the mouse mammary tumor virus (MMTV). In these studies, Sodium Iodide Symporter (NIS) transfers the radioactive <sup>125</sup>I to the mammary glands of lactating mice and in particular to those mammaries with visible tumors. These studies have principally been carried out using pixellated scintillators coupled to position sensitive photomultiplier tubes (PSPMTs). More recently, we have initiated such studies with a monolithic slab of LaBr<sub>3</sub> scintillator coupled to an array of PSPMTs. Several techniques of mapping and measuring the development of such tumors have been employed. These will be discussed in detail and preliminary results will be reported.

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