

Abstract Submitted
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Study on the KCl Fluorescent X-rays for the MicroX Imaging Rocket¹ JOSE A. RODRIGUEZ LOPEZ, University of Texas at El Paso, ENEC-TALI FIGUEROA-FELICIANO, STEVEN W. LEMAN, STEVEN KISSEL, Massachusetts Institute of Technology — The Micro-X High Resolution Microcalorimeter X-ray Imaging Rocket (Micro-X) is an experiment that combines transition-edge-sensors (TES) with a conical imaging mirror, to obtain high-spectral-resolution images of extended X-ray sources. An Fe-55 source will be set on-board to fluoresce a KCl ring to provide calibration lines of 2.62, 2.81, 3.31 and 3.58 keV, these lines will not interfere with the energy band that Micro-X intends to observe, which is from 0.3 to 2.5 keV. An extensive study has been conducted on how the event rate varies when filters of different materials are put in front of the KCl ring. This study was conducted using charge-coupled-devices (CCD), which are commonly used to detect X-ray events with different energies. The study showed that the source plus a single layer of aluminized mylar (thickness 0.01 mm) will provide enough counts of the desired $Cl\alpha$, $Cl\beta$, $K\alpha$, and $K\beta$ lines with little to no events in the 0 to 2 keV energy band.

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