

Abstract Submitted  
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**Miniaturized Energy Spectrometer for Space Plasma Measurements<sup>1</sup>** RAPHAELA GOES DE LIMA, EARL SCIME, AMY KEESEE, GREG LUSK, West Virginia Univ — Taking advantage of technological developments in lithographic fabrication techniques over the past two decades, we have designed an ultra-compact plasma spectrometer that requires only low voltage power supplies, no microchannel plates, and has a high aperture area to instrument area ratio. The designed target is for ions in the 3- 20 keV range with a highly directional field of view. In addition to reducing mass, size, and voltage requirements, the new design will revolutionize the manufacturing process of plasma spectrometers, enabling large quantities of identical instruments to be manufactured at low individual unit cost. Such a plasma spectrometer is ideal for Heliophysics plasma investigations, particularly for small satellite and multi-spacecraft missions. Here we present initial measurements of the performance of the instrument components and designs of the electronics for the low energy threshold solid state detector.

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