Abstract Submitted
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Quality assessment of samples by in-air Ion-Tracked Transmission Ion Microscopy[1] ARTHUR PALLONE, Murray State University — The need for sample quality assessment exists in many fields. An ion-tracked transmission ion microscope (ITTIM) will fulfill one such need – the nondestructive monitoring of changes in sample areal density. A simplified low-cost ITTIM technology demonstrator will be constructed. Known thickness variations in aluminum thin foil samples will be mapped with the ITTIM. The aluminum samples will then be stressed to impart changes in the areal density and remapped. Detected changes in areal density maps between the unstressed and stressed conditions for each foil will demonstrate the usefulness of and limits to the ITTIM. Applications in materials research, biology and other areas will be explored as time permits.

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