

Abstract Submitted  
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**Affine Fractal Characterization of Damage Path in Incipiently Spalled Tantalum** DAVIS TONKS, BEN HENRIE, CARL TRUJILLO, Los Alamos National Lab, WILLIAM THISSELL — The damage in the “spall plane” of tantalum incipiently spalled in a gas gun consists of voids and regions of localized shear between the voids. A continuous path can be traced through these features from one side of the spall plane to the other. The geometry of this path has been analyzed using wavelets to show that it constitutes, to a good approximation, an affine fractal, i. e it is statistically invariant with power law dependence with different exponents normal to and along the spall plane. The details of this analysis will be presented together with insight as to the physical meaning of the results.

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