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**Axial Characterization of the  
SEPW Penetrator Case**Vesta I. Bateman, John L. Cawfield, Neil T. Davie,  
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Prepared by  
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# Axial Characterization of the SEPW Penetrator Case

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## Abstract

The response of a penetrator structure to a spatially distributed mechanical impulse with a magnitude approaching field test force levels (1 to 2 Mlb) was measured. The frequency response function calculated from the response to this unique forcing function is compared to frequency response functions calculated from response to point forces of  $\sim 2,000$  lb and  $\sim 100,000$  lb. The results show that the strain gages installed on the penetrator case respond similarly to a point axial force and to a spatially distributed axial force. This result suggests that the distributed axial force generated during a penetration event may be reconstructed as a point axial force when the penetrator behaves in a linear manner.

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DOD  
MCIL  
63

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DOD  
MCIL  
63

# Axial Characterization of the SEPW Penetrator Case

## Introduction

DOD  
MCTL B6

DOD  
MTL  
13

POD  
NOT  
B6

DOD  
MGT  
b(C3)

DOD  
MCH  
b(3)

DOD  
MCT  
b6

DAD  
MOM  
BOB

PCR  
MCT L  
b(3)

DOD  
met  
b6g)

DOD  
M 3  
B 3

DOD  
METH  
687

DOD  
MGT  
b(2)

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