

**NONAUDITORY DAMAGE RISK ASSESSMENT AT THE CREW POSITIONS FOR  
SIMULATED 155MM SELF-PROPELLED HOWITZER MUZZLE BLAST**

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This study was undertaken to establish the nonauditory injury subthreshold in a simulated muzzle blast environment like that produced when firing an M109 155mm self-propelled howitzer (SPH) with one or more hatches open. An explosively driven shock tube, the hull of an M 1 08 SPH, and a six-plate reflector system were used to produce the required muzzle blast signature. Using as many as 40 anesthetized sheep for each exposure condition, safe no-injury levels were established with an occasional minor upper respiratory tract lesion. These levels were 24 kPa for 6 blasts and 20kPa for 25 to 100 blasts.