

Abstract Submitted  
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**Experimental Study on Colliding Shock Waves and Mach Stem Formation in Metals.** HAIBO HU, CHONGYU ZHANG, XIANG WANG, YONGTAO CHEN, TIEGANG TANG, China Academy of Engineering Physics, LABORATORY FOR SHOCK WAVE AND DETONATION PHYSICS RESEARCH TEAM — The dynamic behavior of different metals under sliding detonation loading and head-on colliding shock waves is studied by using small spot multi-channel PDV. The free surface velocity data have shown different responses of Cu, Pb and W near the colliding surface including the regular reflection and the formation of Mach stem of two colliding shock waves when shock waves comes out from inside on free surface. These experimental data can be used to give more detailed interpretation of the phenomena recorded by high speed frame photography and radiography of the high speed mass spiking in the collision region of two shock waves.

Marvin Zocher  
Los Alamos National Laboratory

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