

Abstract Submitted  
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**Velocity spectra from explosively driven powders and balls**  
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pability to measure velocity distributions using Photon Doppler Velocimetry (PDV)  
has given rise to much data that were not measurable with velocimetry techniques  
available before 2004. In our PDV measurements on explosively driven metals, we  
have often seen a single velocity disappear in a wide distribution of velocities. We  
have attributed this to HE gases, metal pieces, or a mix emerging from cracks in  
the metal after it fails. However, we are unaware of any experiments that support  
this interpretation. We have completed a short series of experiments using X-rays,  
cameras and PDV on explosively driven powders and balls that show PDV spectra  
similar to what we observed in our experiments in which the metal fails. We will  
present these spectra to help workers interpret their velocity spectra.

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