

HIGH-SPEED IMAGING SYSTEM FOR CAPTURING HIGH-EXPLOSIVE CASE BREAK-UP

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ABSTRACT

Imaging of high-explosive case break-up has challenges of frame rate, resolution, system isolation, protection, focus lengths, and lighting. The developments of a new laser imaging system addressed and meet these challenges. The laser provides the needed light source to prevent washout of the image from the fireball. This poster shows images of case break-up of steel and aluminum cases with matching masses. Detail photographs demonstrated how the new laser imaging system can overcome the aforementioned challenges. Camera exposure times extended down to 20 nanoseconds with limited motion blur and with a resolution of four megabits. Comparisons between steel and aluminum cases are presented.