

Supplementary material

Two videos that can be downloaded with the respective link.

CSSL

100000 fps, resolution 384x64, interval 10 μ s, trigger time 82783 μ s, exposure 1 μ s.

L=30 mm, impact velocity 0.76 m/s.

<https://1drv.ms/v/s!Ai7NqBzfn73IrTICpMHWKL2BOQqH>

TWC-CSSL

95238 fps, resolution 400x64, interval 11 μ s, trigger time 167306 μ s, exposure 1 μ s.

L=90 mm, impact velocity 1.05 m/s, TWC starts to be observed 10 μ s after impact.

<https://1drv.ms/v/s!Ai7NqBzfn73IrTqVunovmu5hTAFh>