

Abstract Submitted  
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**Measurement of Impact Surface with a Frontal Electrode** ILAN BE'ERY, MOSHE AHARON, Rafael Advanced Defense Systems — Laboratory guns are a major tool in the measurements of shock. When high precision is required, the tilt and bow of the impactor must be measured. This is usually done with an array of shock-arrival diagnostics at the back of the target. Such an array limits the useful surface area and thickness of the target. In the present work we demonstrate that the tilt and bow can be measured by using a thin electrode with many shorting strips, which is attached to the front surface of the target. The exact location of the shorting point in each strip is not predetermined, but depends on the impactor's tilt and bow. Nevertheless, in most cases the entire shorting sequence can be fitted with high confidence and accuracy to a unique combination of tilt and bow. The accuracy of tilt and bow measurements with this electrode are comparable to those obtained with shorting pins at the back of the target.

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