

## **THE USE OF A CORONA DISCHARGE MICROPHONE FOR MEASURING AIR DENSITY BEHIND A SHOCK FRONT**

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Various techniques and instruments have been investigated at AWRE Foulness for measuring the air shock parameters associated with shock and blast waves. The current interest is in establishing the performance of the Foulness Air Blast Simulator during its on-going development.

This paper focuses on one particular instrument, a corona discharge microphone, developed for measuring air shock density. the technique is based on the measurement of the density sensitive corona discharge current flowing between 2 electrodes immersed in the air flow due to an applied voltage of several kV. Performance details will be presented relating to response, accuracy and spatial resolution.