

CALIBRATION OF DRAG SENSITIVE TARGETS SUBJECTED TO NON-IDEAL AIR BLAST

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During the British atmospheric nuclear tests carried out in the 1950's it was noticed that under certain circumstances the blast wave adjacent to the desert surface was significantly different to that observed when the weapon was detonated over the sea. The blast wave shape of that propagated over water, commonly referred to as near-ideal, was more characteristic of a high-explosive event detonated over a hard clean surface. It was also noticed that targets which were sensitive to drag were more heavily damaged than expected and the effects of dust loading were very evident.

Whilst today we have instruments to measure the dynamic pressure, during the period of Australian trials no suitable instrumentation was available to the UK experimenters. However, to get a feel for the magnitude of the phenomenon a number of drag-sensitive targets were spaced out along a cleared radial on the last full nuclear atmospheric test at Maralinga in Australia, called Antler 3.