

## **SECONDARY SHOCK MEASUREMENT COMPARISON AND VALIDATION TO IMPLEMENT THE POST-COMBUSTION MODEL**

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**Key words:** post-combustion, blast experiments, blast numerical simulations, fireball, secondary shock

The post-combustion issues associated with blast effects and particles afterburn are very complex to describe because it involves turbulent mixing in a wide range of pressures and temperatures. In this paper, we propose dedicated blast experiments in free field to investigate the influence of the secondary shock in this process. Reference RDX based spherical charges are tested at 3.5 m meter height in order to avoid ground reflection during the first steps of the shock waves propagation. Side-on pressures at different distances are compared with high speed camera recordings. A new video analysis method is developed to extract the key parameters: the shock waves positions versus time and the fireball boundaries. Numerical simulations are performed with Ouranos hydrocode. Detonation products EOS are calculated first with SIAME thermochemical code. For the post-combustion model, the diffusion coefficient was identified previously with the fireball motion. A new calibration is proposed with the secondary shock data of the lower charge weight and validated on the heavier charge.