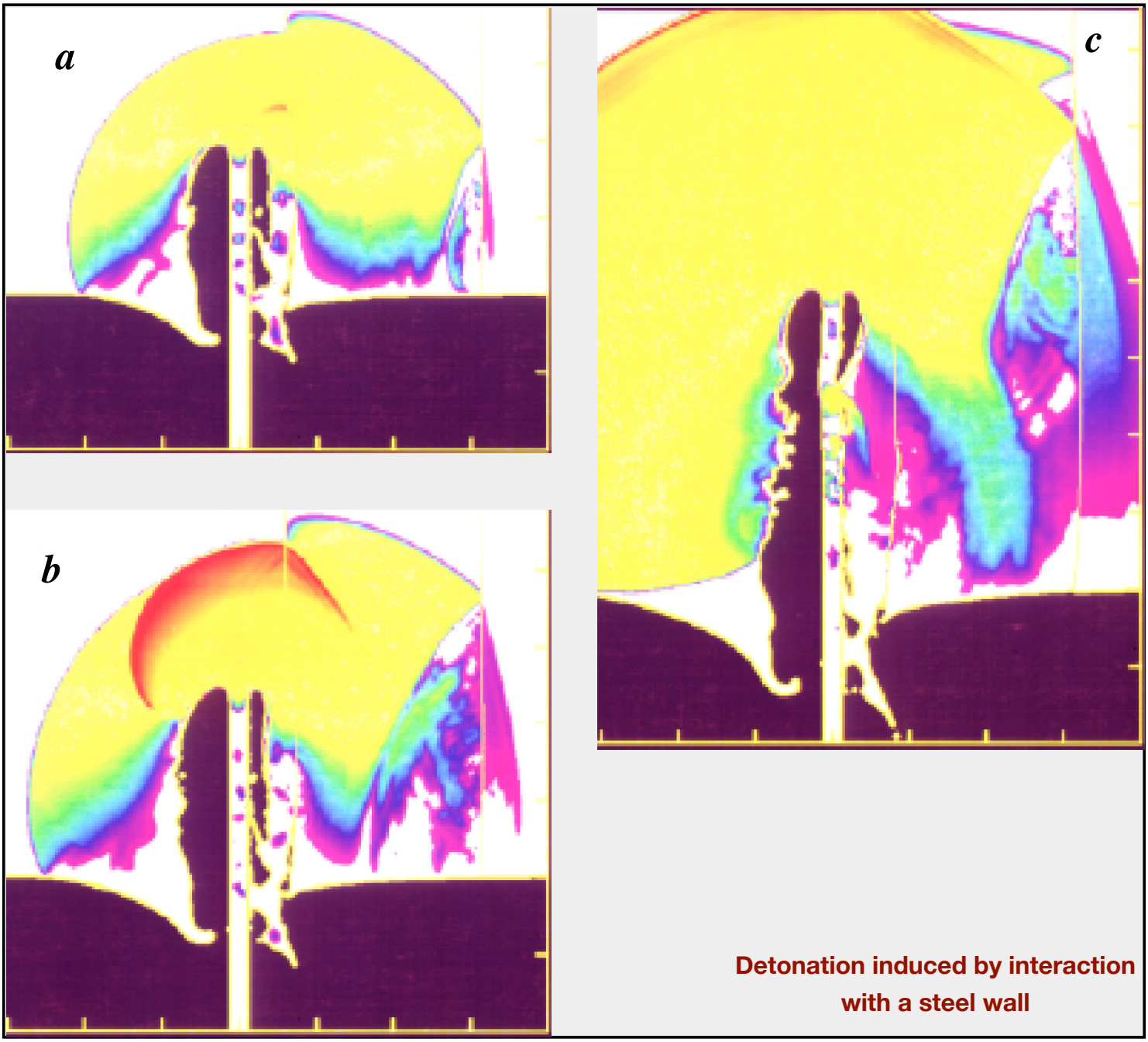

JET PENETRATION INTO LIQUID ENERGETIC MATERIALS (LEM)

NUMERICAL SIMULATION EXAMPLE

Typically each project requires tightly integrated efforts in experimentation, theory and numerical simulation. In this particular case I produced these parameter studies to simulate shaped-charge jet penetration into nitromethane in support of several experimental series.

These studies showed, for example, that detonation can be initiated at the bow shock surrounding the jet tip if this shock is able to interact with a wall where the shock speed in the wall is greater than the speed of the bow shock. In addition, these studies also provided an explanation of the mechanism for an observed pulsating detonation at the jet tip.

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