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Ignition and Growth Reactive Flow Modeling of Recent HMX/TATB Detonation Experiments[1] CRAIG TARVER, Lawrence Livermore National Laboratory — Ignition and Growth model parameters for detonating PBX 9501 (95%HMX, 2.5 %Estane, 2.5%BDNPAF) and PBX 9502 (95%TATB, 5%Kel-F800) are used to simulate two experiments in which detonating HMX-based PBX's accelerate slower detonating TATB PBX's [1,2]. The measured HMX and TATB detonation velocities, the angles produced in the detonating TATB charges by the leading HMX detonation waves, the arrival times of the complex detonation wave front, and the PDV records measured at several positions along the interfaces between the two explosives and LiF windows are accurately calculated.

[1] C. Matignon, R. Sorin, and O. Bozier, 14th Int. Detonation Symposium, 2010, p. 1182.
[2] E. Anderson, T. Aslam, and S. Jackson, Combustion and Flame 161, 1944 (2014).

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