

Abstract Submitted  
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**Determination of detonation parameters for liquid High Explosives** VALENTINA MOCHALOVA, ALEXANDER UTKIN, Institute of problems of chemical physics — The experimental investigation of detonation parameters and reaction zone structure in liquid HE (bis-(2-fluoro-2,2-dinitroethyl)formal (FEFO), tetranitromethane (TNM), nitromethane (NM)) was conducted. Detonation front in TNM and NM was stable while the instability of detonation in FEFO was observed. Von Neumann spike was recorded for these HE and its parameters were determined. The different methods for C-J point determination were used for each HE. For FEFO reaction time  $\tau$  was found from experiments with different charge diameters ( $\tau$  is approximately equal to 300 ns); for TNM – at fixed diameter and different lengths of charges ( $\tau \approx 200$  ns); for NM – at fixed diameter and length of charges, but detonation initiation was carried out by different explosive charges ( $\tau \approx 50$  ns). It was found that in TNM the detonation velocity depends on charge diameter. Maximum value of reaction rate in investigated liquid HE was observed after shock jump and induction time was not recorded.

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