

High-speed rotating mirror digital camera for improved accuracy in recording shock and detonation waves

**Turkin V.N.^{1,®}, Bychkov A.S.¹, Myagkov A.M.¹,
Dormidonov A.E.¹, Kamenev V.G.¹ and Arapov Yu.D.¹**

¹ Dukhov Research Institute of Automatics (VNIIA), Luganskaya 9, Moscow, 115304, Russia

® vitaly.turkin@bk.ru

The paper presents the results of developing a high-speed rotating mirror digital camera designed for high-precision recording of fast transient processes. A continuous digital photochronogram is formed using an array sequence of image sensors optically coupled through a mirror system. Experimental results on the registration of shock and detonation waves demonstrate the high resolution and efficiency of the proposed method.