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The use of Light Detectors to discriminate between detonation and deflagration of explosive charges

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Abstract

It is well known that reacting explosives emit light of varying intensity across the spectrum. Measurement of this light emission could have many applications, *i.a.* the local or stand-off discrimination between full detonation and deflagration of an explosive charge. This information is important during research into new explosives formulations (e.g. Insensitive Munitions) and general explosive related tests. This paper discusses the use of a particular photodiode application, and proposes its use to discriminate between detonation and deflagration by analysing the captured emitted light emanating from the initiated charge.