

Abstract Submitted
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Level-1 Trigger of the GlueX experiment at Jefferson Lab
ALEXANDER SOMOV, JLAB, GLUEX COLLABORATION — The GlueX is a new experiment at Jefferson Lab designed to search for mesons with exotic-quantum-numbers using high-intensity beam of polarized photons incident on a liquid hydrogen target. The goal of the Level-1 trigger of the GlueX experiment is to reduce the background rate induced by electromagnetic and hadronic interactions (to 200 kHz total rate) while keeping efficiency for accepting exotic mesons of interest close to unity. The trigger algorithm is based on measurement of the energy depositions in two electromagnetic calorimeters and hit counts in the tagger hodoscopes, the time-of-flight detector, and the Start Counter. The algorithm will be implemented on electronics boards developed at Jefferson Lab, which will perform online data processing at a 250 MHz clock. We will describe the Level-1 trigger algorithm and overview the trigger electronics.

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