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## Level-1 RPC Trigger in the CMS experiment - software for emulation and commissioning

*Thursday, September 6, 2007 2:00 PM (20 minutes)*

The CMS detector will start its operation in the end of 2007. Until that time great care must be taken in order to assure that hardware operation is fully understood. We present an example of how emulation software helps achieving this goal in the CMS Level-1 RPC Trigger system.

The design of the RPC trigger allows to insert sets of so-called test pulses at any stage of the hardware pipeline. Reading out data from different stages is also possible. Such design allows for easy debugging of the trigger hardware by comparing hardware and software emulation values, since the software and hardware algorithms are identical.

In the talk we would like to present the architecture of our test applications, specific test cases and the RPC trigger emulation software itself.

### Submitted on behalf of Collaboration (ex, BaBar, ATLAS)

CMS

**Primary authors:** Dr KALINOWSKI, Artur (Institute of Experimental Physics - University of Warsaw); Mr BUNKOWSKI, Karol (Institute of Experimental Physics - University of Warsaw); Dr KONECKI, Marcin (Institute of Experimental Physics - University of Warsaw); Dr BLUJ, Michal (Soltan Institute for Nuclear Studies - Warsaw); Mr PIETRUSINSKI, Michal (Institute of Experimental Physics - University of Warsaw); Mr FRUEBOES, Tomasz Maciej (Institute of Experimental Physics - University of Warsaw)

**Presenter:** Mr FRUEBOES, Tomasz Maciej (Institute of Experimental Physics - University of Warsaw)

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