

# Efficiency estimation of self-triggered antenna clusters for air-shower detection

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*What is this contribution about?*

We present an approach to testing the various procedures of trigger generation by radio data and estimation its efficiency, and show preliminary results of its performance on Tunka-Rex data.

*Why is it relevant / interesting?*

Air-shower radio arrays require efficient self-triggering techniques due to low-signal-to-noise ratio conditions and various background pulses. Due to complexity of self-triggering for radio, it is necessary to make a tool for testing the various procedures of trigger generation and estimating its efficiency before deployment the hardware self-trigger.

*What have we done?*

We develop the framework for testing various procedures of trigger generation using pre-recorded data. Using this framework we estimate the efficiency and count rate of trigger generation procedure based on clustered amplitude threshold using simulated Tunka-Rex data.

*What is the result?*

We developed the software for testing the procedures of self-triggering and estimation of clustered amplitude trigger on simulated Tunka-Rex data.

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