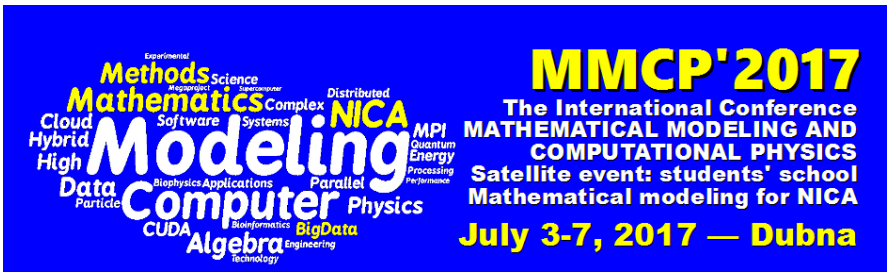


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# 4-dimensional reconstruction of time-slices

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Traditional latency-limited trigger architectures, typical for conventional experiments with a hardware trigger, are inapplicable for CBM. Instead, the experiment will ship and collect time-stamped data into a readout buffer in a form of a time-slice of a certain length with no isolated collisions, and deliver it to a large computer farm, where online event reconstruction and selection will be performed. Grouping of measurements into physical collisions must be performed in software and requires reconstruction not only in space, but also in time, the so-called 4-dimensional track reconstruction and event building. The tracks, reconstructed with 4D Cellular Automaton track finder, are combined into event-corresponding clusters according to the estimated time at the target position and its errors. The obtained events were given as an input to the KF Particle Finder package for reconstruction of short-lived particles.

**Primary author:** Ms AKISHINA, Valentina (GSI)

**Co-authors:** Dr VASSILIEV, Iouri (GSI); Prof. KISEL, Ivan (Goethe University Frankfurt, Frankfurt am Main, Hesse, Germany, Frankfurt Institute for Advanced Studies, Frankfurt am Main, Hesse, Germany GSI Helmholtz Centre for Heavy Ion Research, Darmstadt, Germany); Dr ZYZAK, Maksym (GSI)

**Presenter:** Ms AKISHINA, Valentina (GSI)

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