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Matrix Element Calculations on the GPU

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Generating large numbers of events efficiently is a major bottleneck for ML projects. As a first step towards a full-fledged event generator for modern GPUs, we investigated different recursive strategies. The GPU implementations are compared to the state-of-the-art CPU codes, showing promise for using these in other pipelines. Finally, we propose baseline implementations for the development of a future full scale event generator on GPUs.

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Session Classification: Regression, Calibration, and Fast Inference