

Leading-colour-based unweighted event generation

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Abstract

In this work...

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1 Introduction

In preparation

2 Method

2.1 Overview of two-step event generation

2.2 Re-cycling of currents among processes

3 Results

4 Discussion and outlook

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process	recursion-based	diagram-based (MadGraph_aMC@NLO)
$pp \rightarrow nj$	2	2
$n = 2$	2	2
$n = 3$	2	2
$n = 4$	2	2
$n = 5$	2	2
$pp \rightarrow e^+e^- + nj$	2	2
$n = 2$	2	2
$n = 3$	2	2
$n = 4$	2	2
$n = 5$	2	2
$pp \rightarrow e^+\nu_e + nj$	2	2
$n = 2$	2	2
$n = 3$	2	2
$n = 4$	2	2
$n = 5$	2	2
$pp \rightarrow t\bar{t} + nj$	2	2
$n = 2$	2	2
$n = 3$	2	2
$n = 4$	2	2
$n = 5$	2	2

Table 1: Timing for generating $N = 10^6$ events for various LHC processes with the recursion-based code, compared to convetional diagram-based event generation with MadGraph_aMC@NLO .