

# 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 ( <code>MadGraph_aMC@NLO</code> )
$pp \rightarrow nj$	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 conventional diagram-based event generation with `MadGraph_aMC@NLO`.