Leading-colour-based unweighted event generation

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Abstract

In this work...

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In preparation

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Acknowledgements

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