

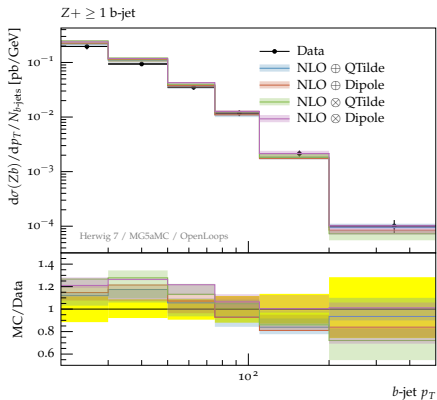
# Zbb in Herwig 7

Graeme Nail

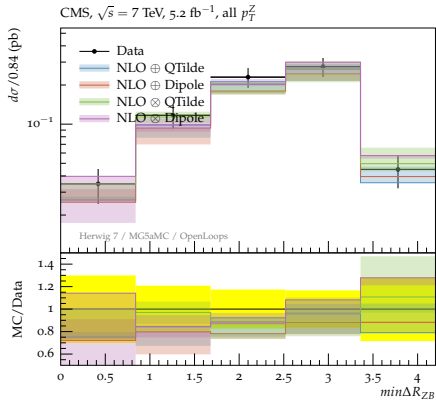
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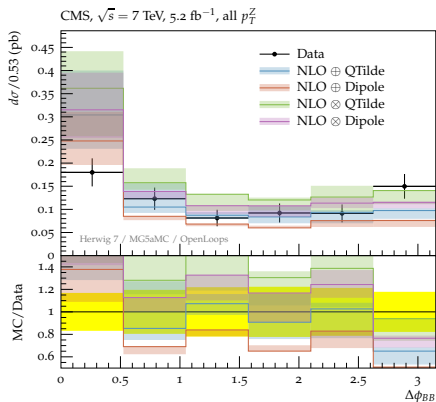
Heavy Flavour Production at the LHC, Durham, April 16<sup>th</sup>, 2016



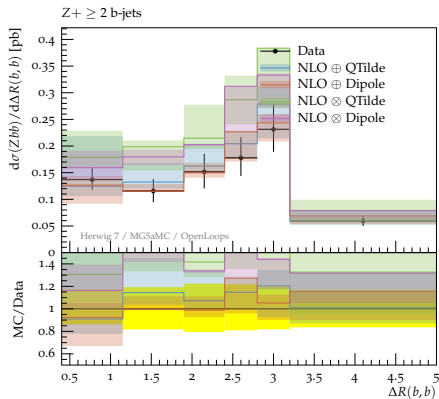
5F Zb



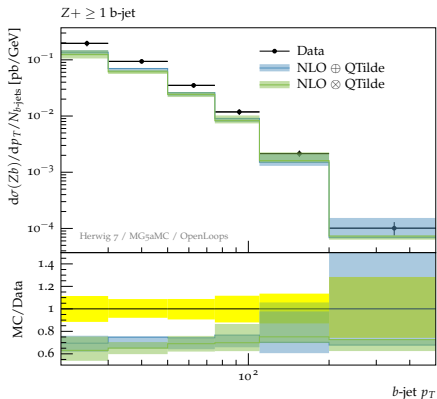
5F Zb



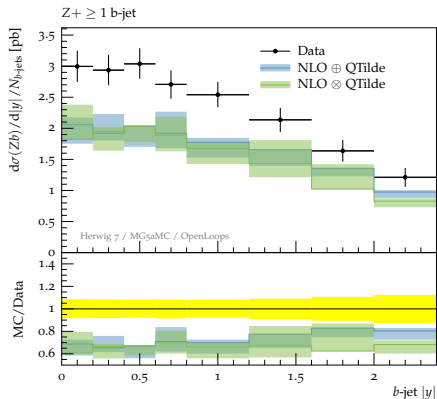
5F Zbb



5F Zbb



4F Zbb



4F Zbb

Detailed assessment of 4F and 5F components

- Running Coupling
- PDFs
- Matrix Elements
- Shower evolution

Gain insight into mass effects in the initial state ( $g \rightarrow bb$ ), use a dedicated handler:

- Generates the first emission from each initial (heavy) leg through backwards evolution
- Uses the quasi-collinear limit
- Implements  $P_{bg}^{(0)}(z, p_T; m_q)$
- Full control of scales, and kinematics

Thanks