

# Updating on group activity and planning for YR3

- Last discussion: LHC HXSWG meeting at CERN, Dec. 5-6.
- Studies for signal process ( $t\bar{t}H$ ):
  - $t\bar{t}H$  available from NLO MC: compare theory points with MC (Pythia)  
M.V. Garzelli, A. Kardos, Z. Trocsanyi → made theory points available  
F. Maltoni, et al. →  $t\bar{t}H$  available in aMC@NLO  
E. Shabalina, C. Neu → comparison with MC (Pythia 6/8).
  - Spin-correlation effects in  $t\bar{t}H$   
P. Artoisenet, R. Frederix, O. Mattelaer, R. Rietkerk → this meeting.
- Studies for background processes ( $t\bar{t}jj$ ,  $t\bar{t}b\bar{b}$ ):
  - overview of experimental studies → A. Juste, A. Rizzi
  - NLO calculations exists, work at providing results within a consistent framework  
S. Dittmaier, A. Denner, S. Pozzorini  
M. Worek, et al.
  - interface with PS MC at NLO;
  - proposed a LO study using ME+PS:  
Madgraph/Madevent (F. Maltoni, et al.), ALPGEN (M. Mangano, et al.),  
Sherpa (F. Krauss, et al.).