

Software Package	Purpose	Physics Processes
MADGRAPH 5.1.3	(LO) Matrix element generator	All backgrounds except single top
POWHEG 1.0	(NLO) Matrix element generator	Single top quark backgrounds
PYTHIA 6.42	Parton showering and fragmentation	All backgrounds and signal
TAUOLA	Decay of τ leptons	Single top quark backgrounds
Z2* tune	Modeling of underlying event	All backgrounds and signal
GEANT4	Modeling of the CMS detector	All backgrounds and signal
CTEQ6M	Parton distribution functions (PDF)	All backgrounds and signal
SUSPECT 2.41	Generation of GGM signal spectrum	Signal
PROSPINO 2.1	(NLO) Cross section calculation	Signal
SDECAY 1.2	Decay tables for GGM particles	Signal