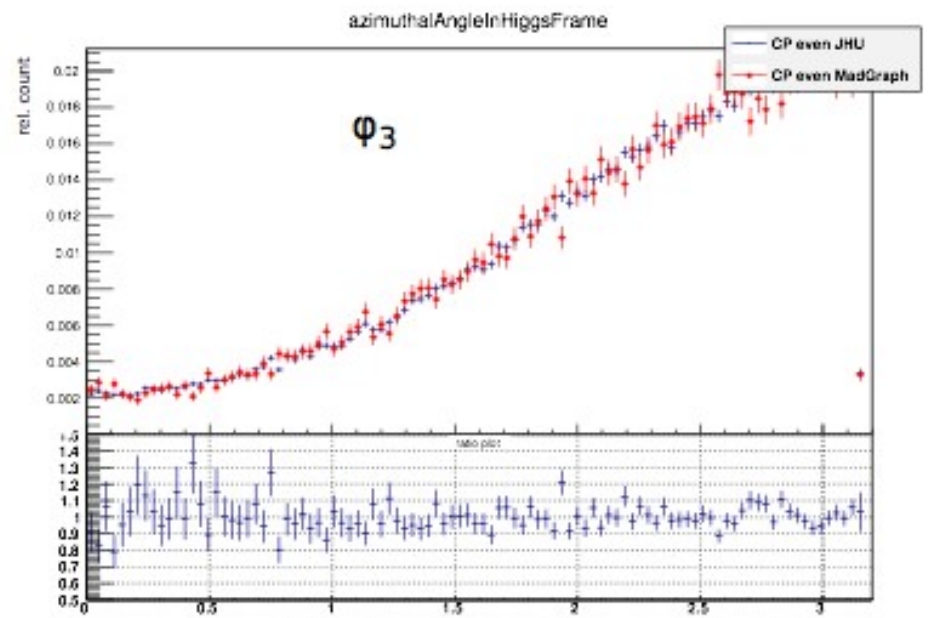
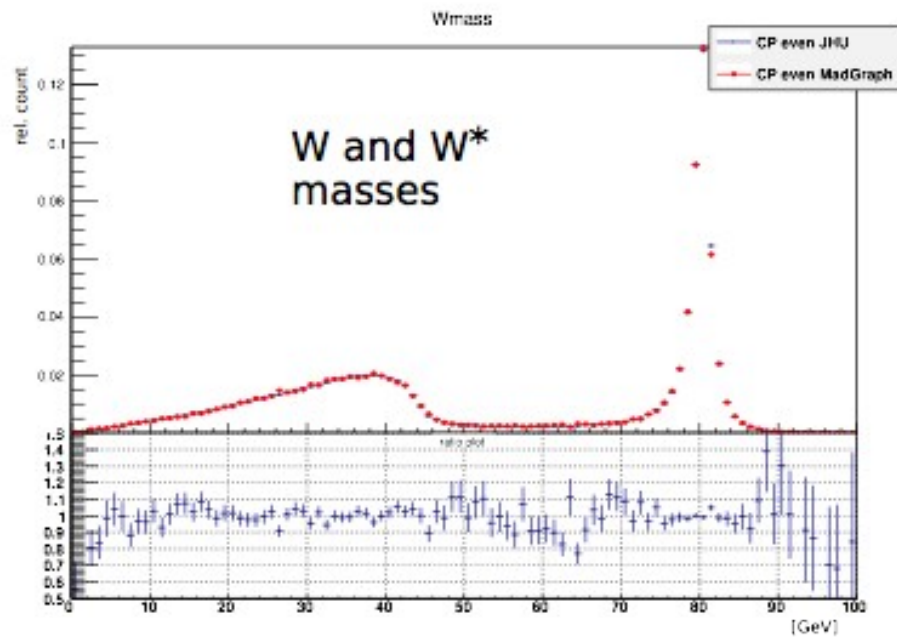
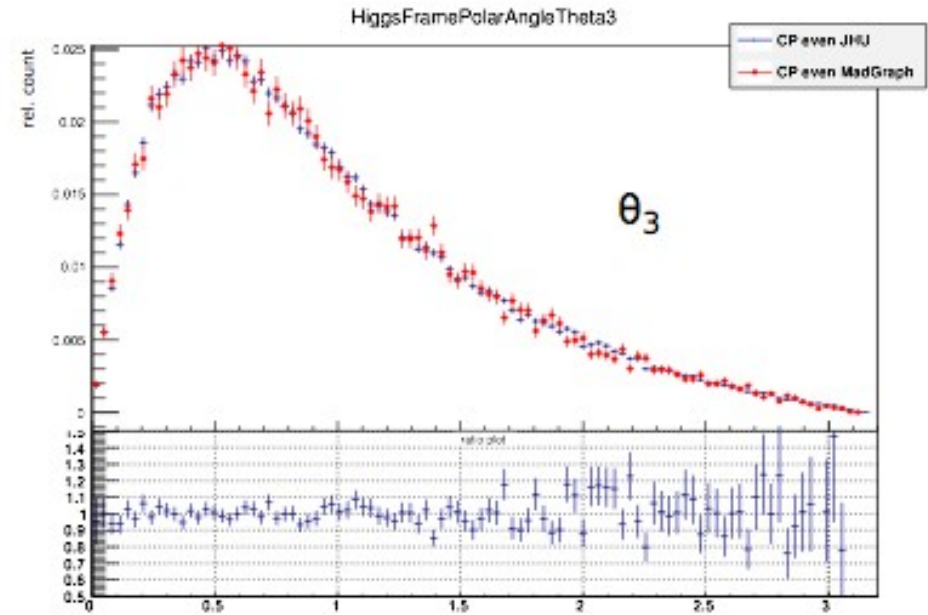
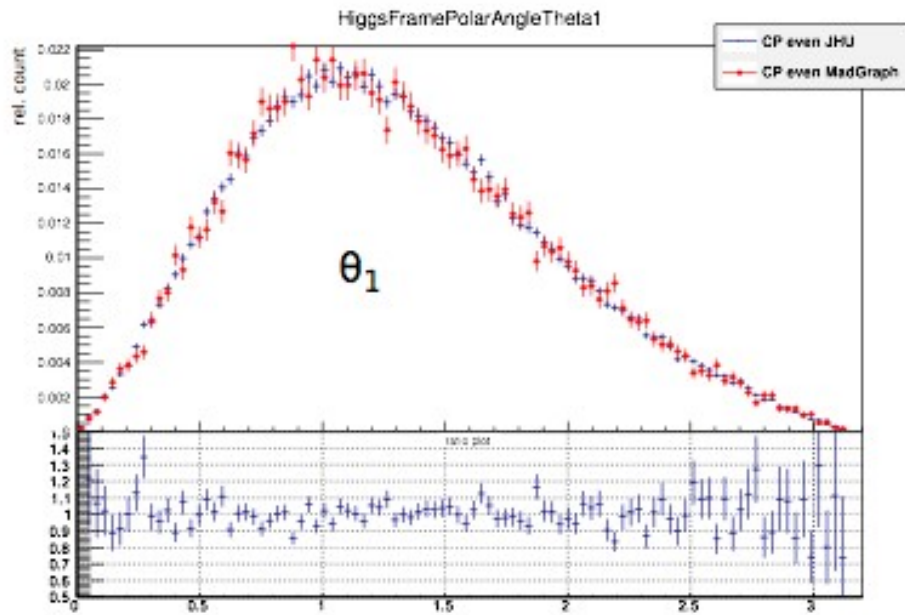


Spin/CP efforts

- So far JHU, MadGraph and Pythia (for spin 2) were tested
- In general good agreement on shape of angular distributions between all generators and expectation
- Angles in $0+$ case agree well with standard Powheg+Pythia
- However, question of “Higgs” p_T and rapidity
 - Use LO prediction?
 - Reweight to SM $0+$ (N)NLO?
 - Reweight to data? \rightarrow nice, but not always possible
- Which models to test and how?
 - Pure Spin/CP states?
 - Mixed states? If yes, how defined?
 - Aim is to have results that the theory community can really use later on. Which assumptions are sensible and wanted?

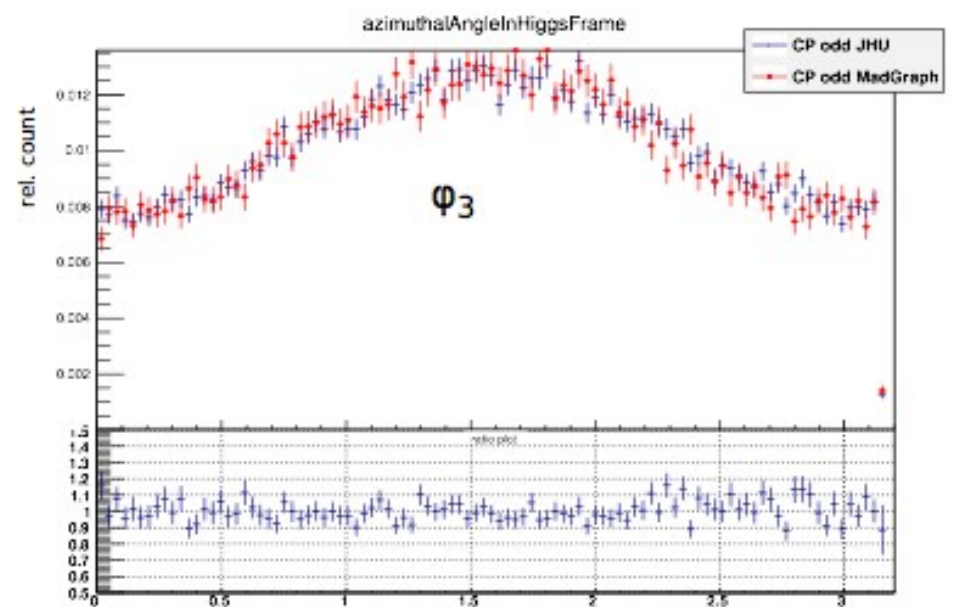
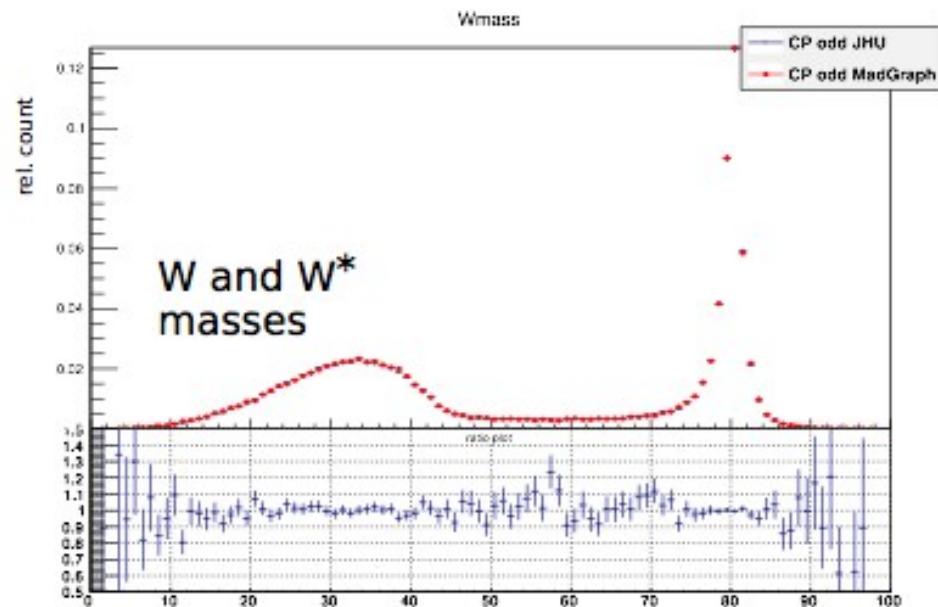
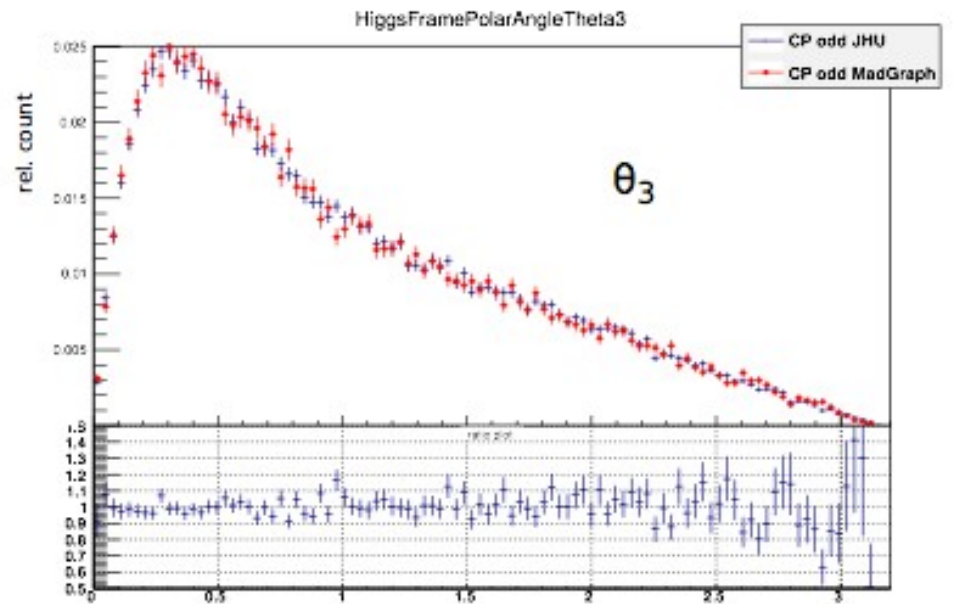
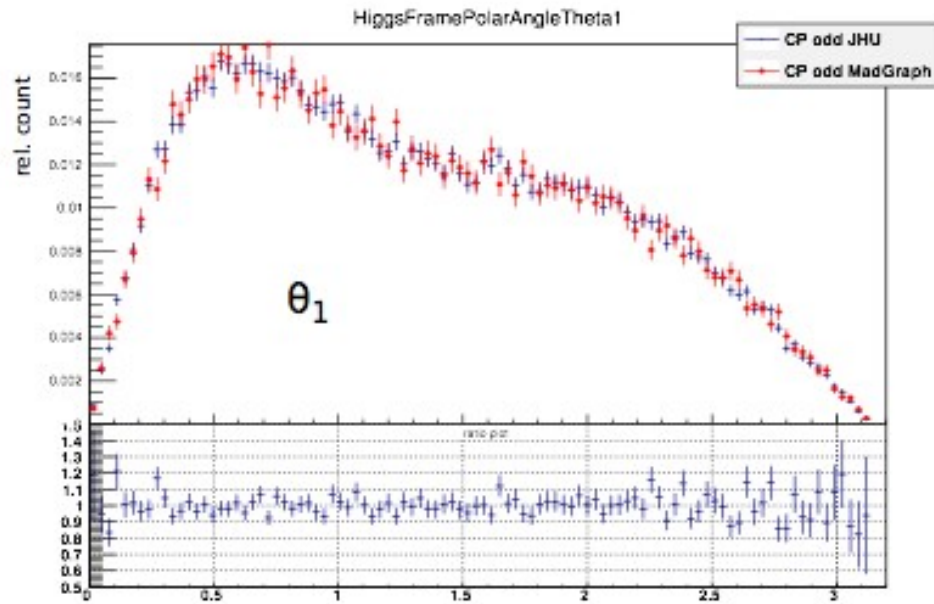
Example $H \rightarrow WW$

JHU/MadGraph comparison for CP even



Example $H \rightarrow WW$

JHU/MadGraph comparison for CP odd



$$H \rightarrow \gamma\gamma$$

Cos θ^* distributions for JHU

