



Status Update

Yonghao Zeng

Kun's Weekly Meeting

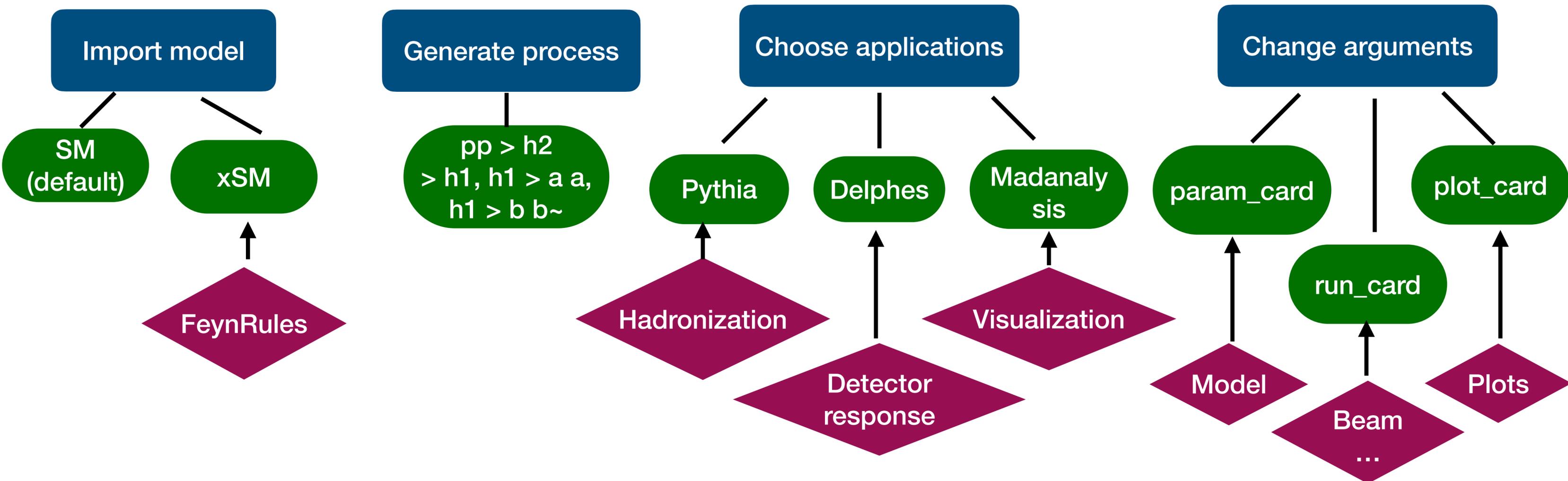
Apr 27, 2022

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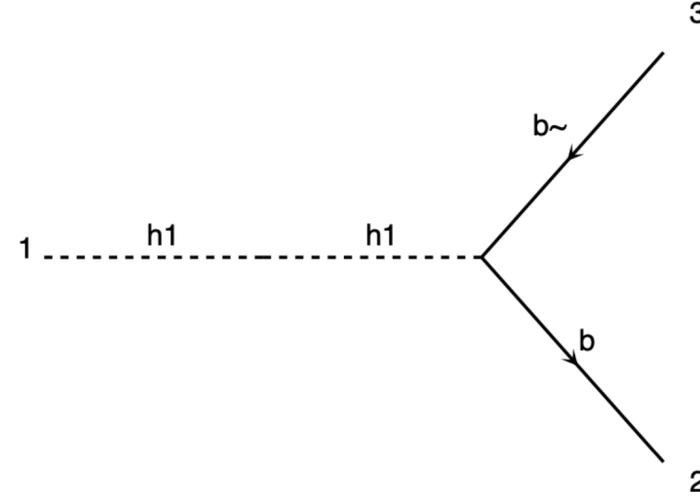
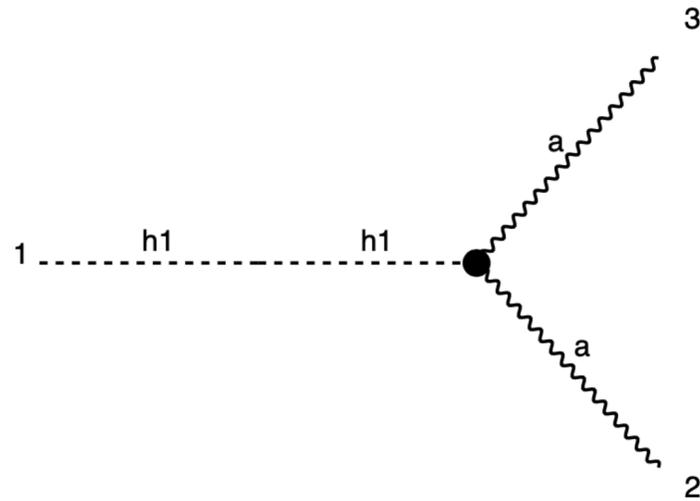
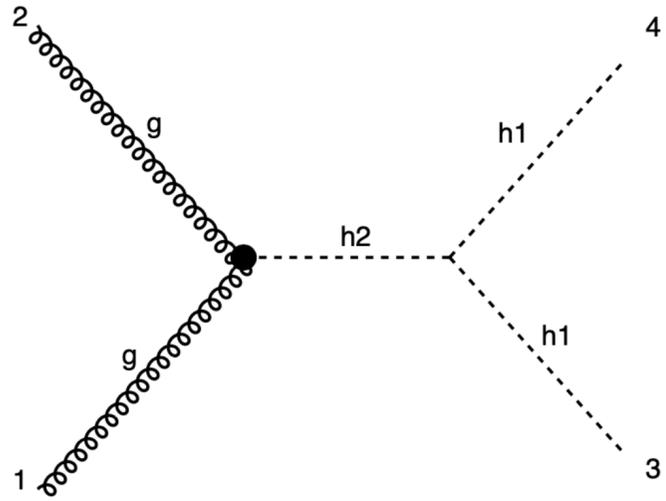
- Repeat $pp \rightarrow h_2 \rightarrow h_1$, $h_1 \rightarrow bb$, $h_1 \rightarrow yy$ signal production with Madgraph5_MC simulator
- Redraw significance vs mass plots following Michael's comments
- Start to write graduation thesis

Simulation Procedure

Madgraph5_MC is a framework that can provide the necessary elements for SM and BSM study, and can utilize variety of tools to realize event analysis and visualization.



Glimpse of Results



- Delphes;1
- Event
- Event_size
- Weight
- Weight_size
- Weight_size
- Weight_size/l
- Track
- Track_size
- Tower
- Tower_size
- EFlowTrack
- EFlowTrack_size
- EFlowPhoton
- EFlowPhoton_size
- EFlowNeutralHadron
- EFlowNeutralHadron_size
- GenJet
- GenJet_size
- GenMissingET
- GenMissingET_size
- Jet
- Jet_size
- Electron
- Electron_size
- Photon
- Photon_size
- Muon
- Muon_size
- FatJet
- FatJet_size
- MissingET
- MissingET_size
- ScalarHT
- ScalarHT_size

```
[yonghaozeng:run_03/ $ ls
parton_systematics.log
run_03_tag_1_banner.txt
run_shower.sh
tag_1_MA5_reco_BasicReco.log
```

```
tag_1_MA5_analysis1.log
tag_1_MA5_analysis2_BasicReco.log
tag_1_delphes.log
tag_1_delphes_events.root
```

```
tag_1_djrs.dat
tag_1_merged_xsecs.txt
tag_1_pts.dat
tag_1_pythia8.cmd
```

```
tag_1_pythia8.log
tag_1_pythia8_BasicReco.lhe.gz
tag_1_pythia8_events.hepmc.gz
unweighted_events.lhe.gz
```



李政道研究所

Thanks

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Tsung-Dao Lee Institute



上海交通大學
SHANGHAI JIAO TONG UNIVERSITY