

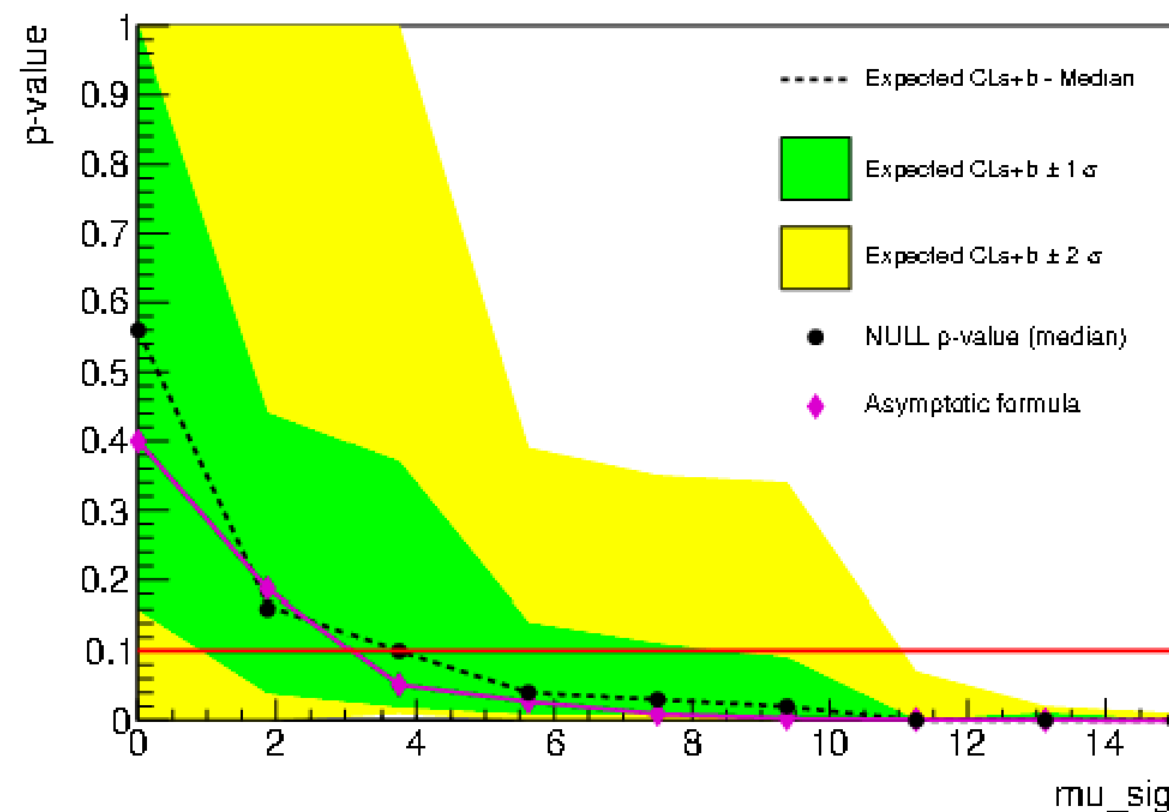
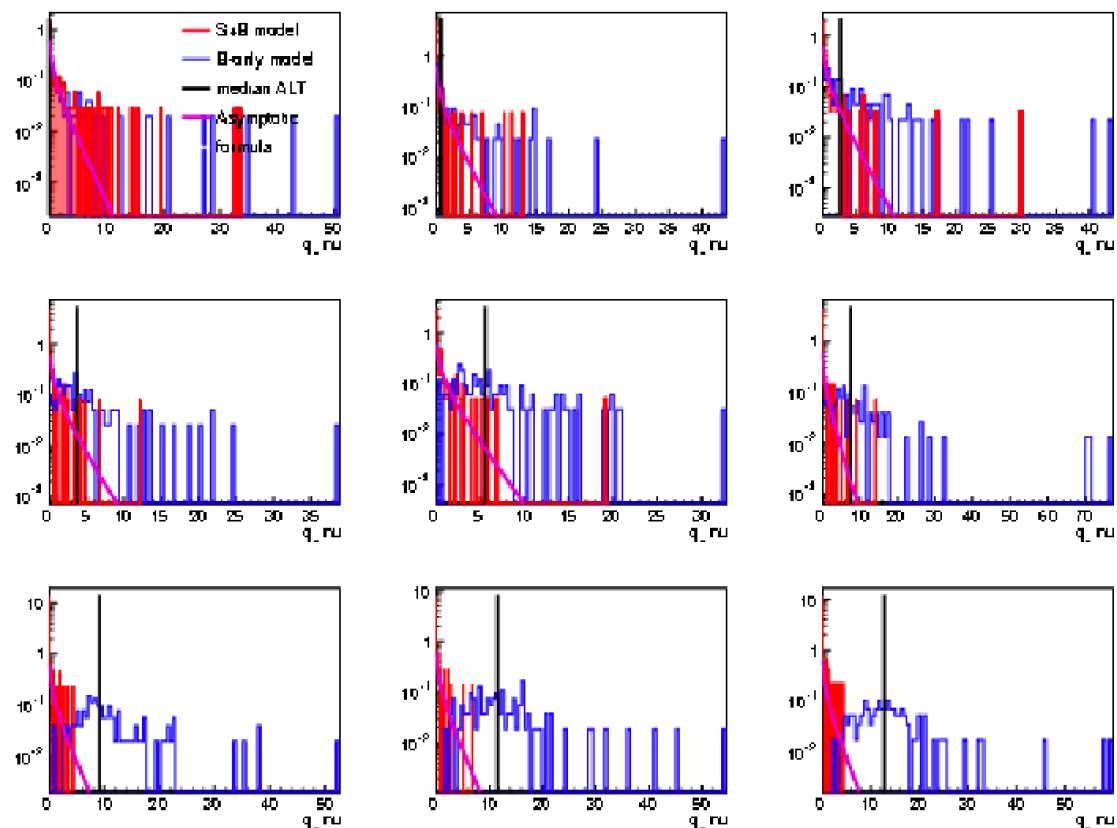
LZStats

Yitong Liu

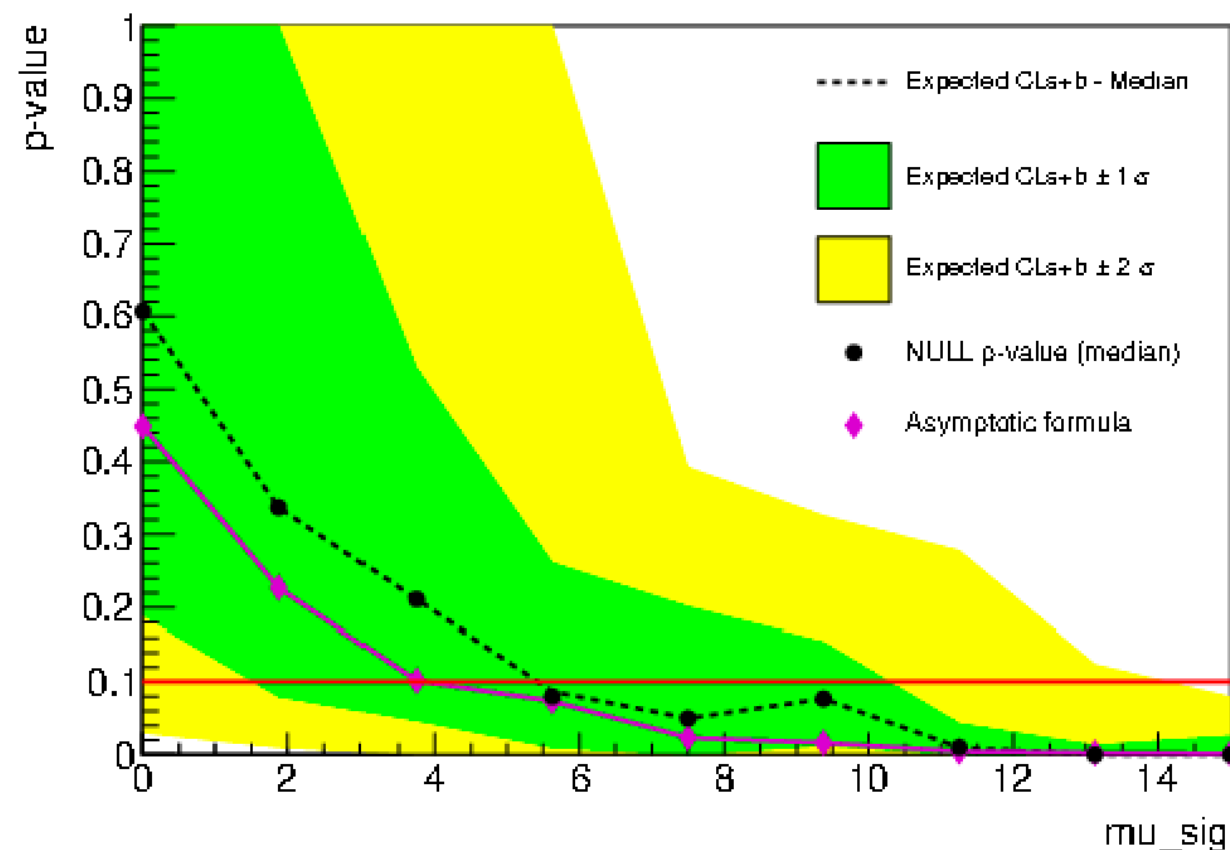
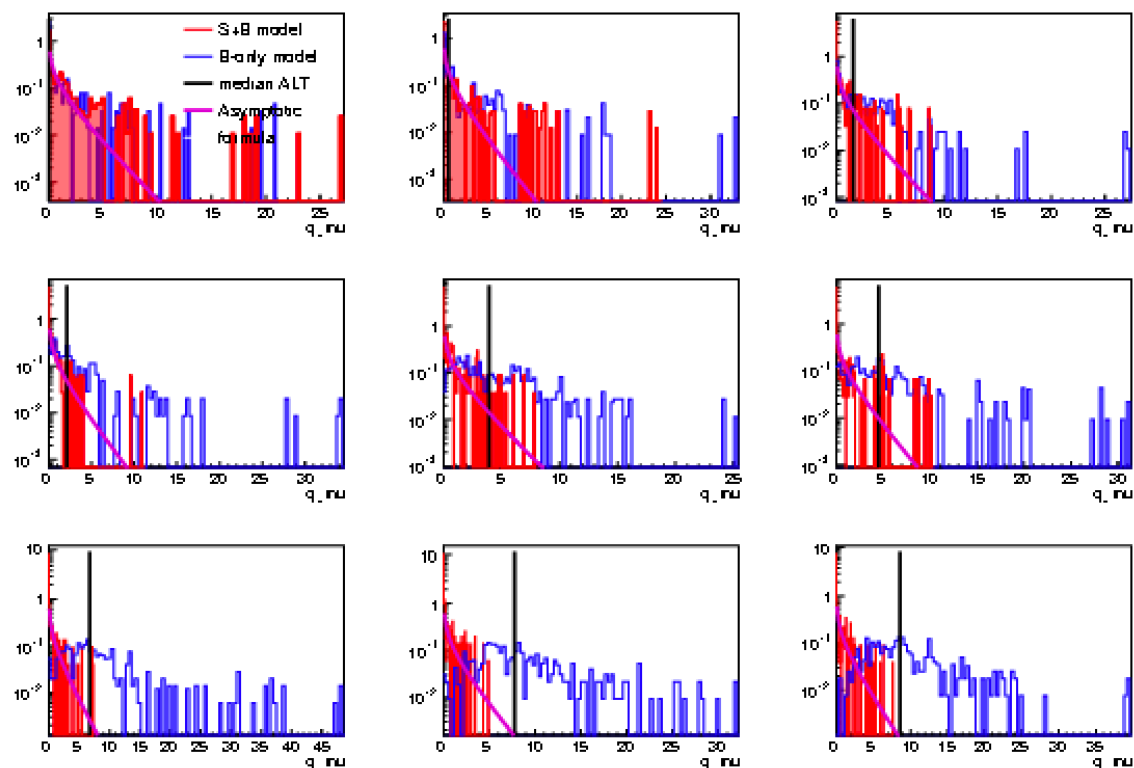
Done:

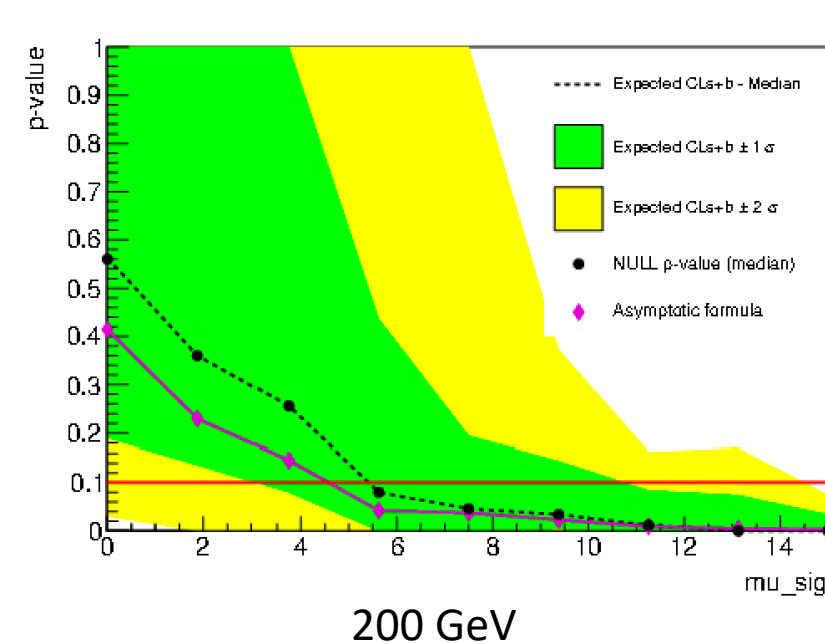
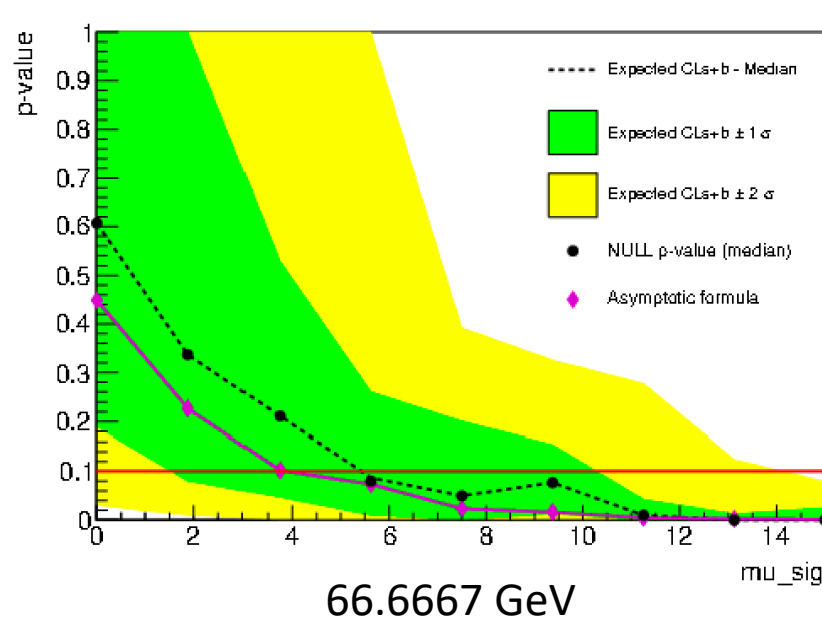
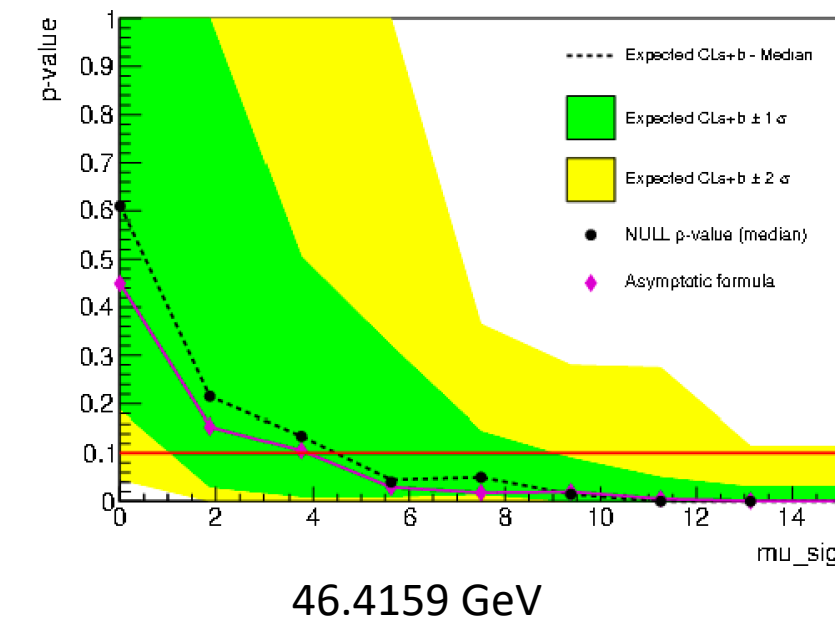
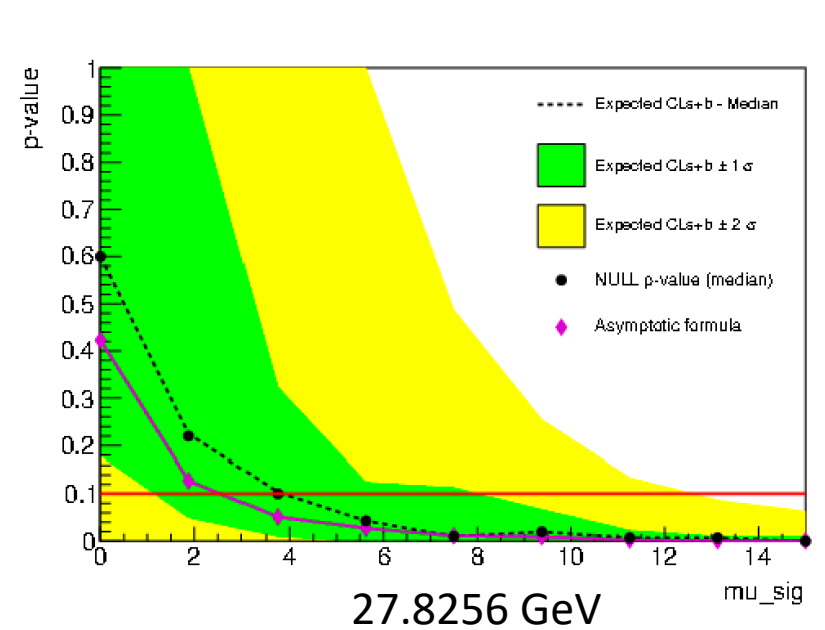
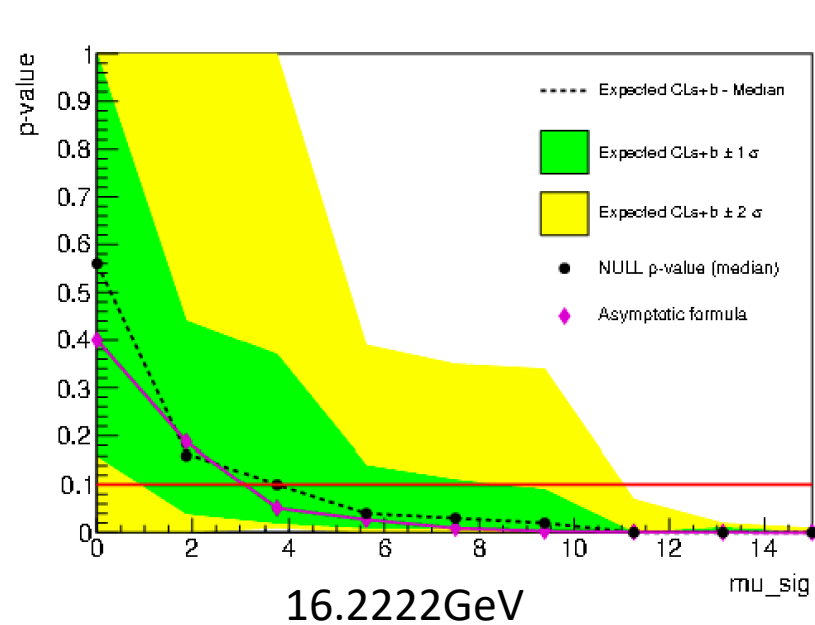
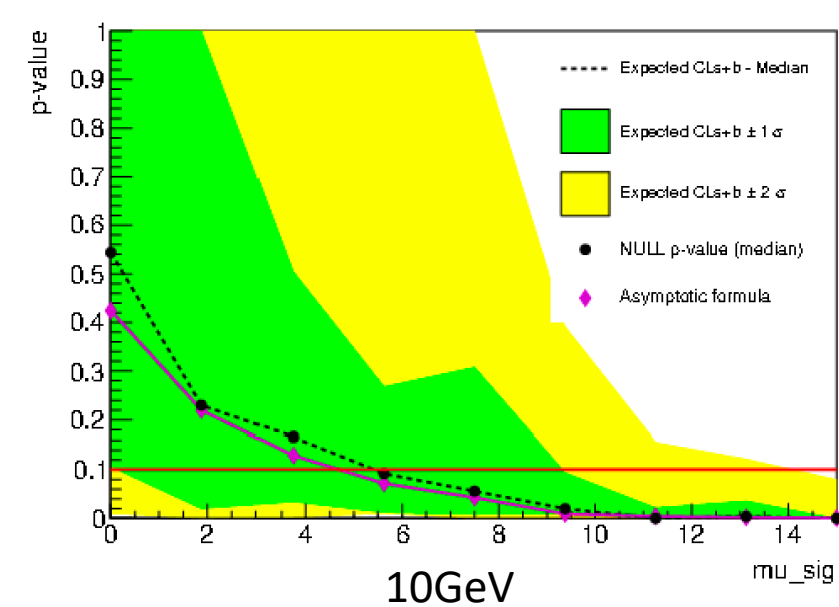
- For mass = 2.0000 GeV
 - ERROR: WIMP histogram is empty for mass 2.0 → Mass 2.0 is too small
- Mass: 10, 16.2222, 27.8256, 46.4159, 66.6667, 100, 200, 1000
- Moved the output from scratch to hdfs.
- Settings: 100 Ntoys, 1e7 samples, take 9 POI, 1000 livedays

Mass = 16.2222

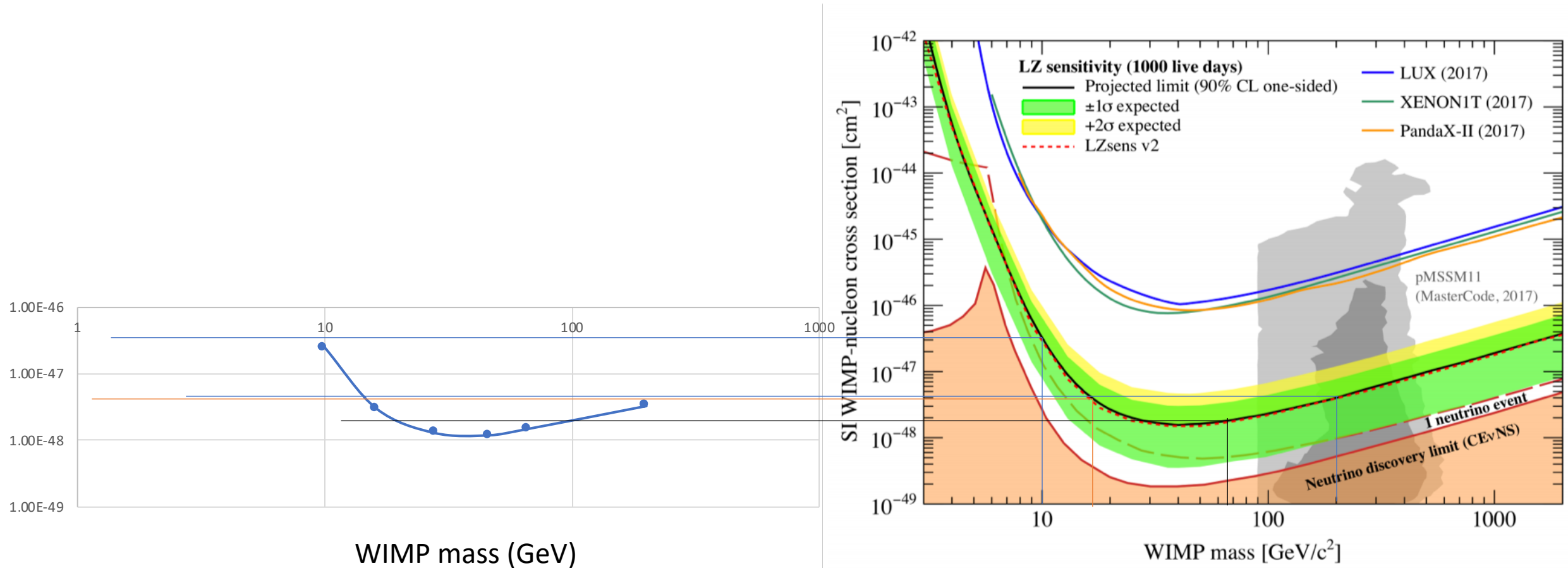


Mass = 66.6667





log scale lz sensitivity :



Understanding the structure of LZStats

- **Submit_MassJobs.sh:**
 - calls for the other two scripts, the one that submits jobs to the cluster
 - Kr mass = 2.0000 & 66.6667
 - #jobs for each mass = 10
- **runWiscJobs.py:**
 - Defines variables and parameters for a job running
- **Submit_lzstats.sh:**
 - When run Submit_MassJobs.sh, each job runs this script on the cluster
- **Setup.sh:**
 - set up the environment

Problem

- For one mass, when extracting 10 tar.gz files, only get one result “...run1”
- Check the error text, ImportError

```
ImportError: /cvmfs/lz.opensciencegrid.org/external/Python/2.7.15/x86_64-centos7-gcc7-opt/lib/python2.7/lib-dynload/array.so: undefined symbol: _PySlice_Unpack  
Info in <RoWorkspace::SaveAs>: ROOT file ./output/lzstats-LZ projected 1e7-WIMP
```

- Ask Jonathan:
 - For the Jobs submitted to the cluster, the python cannot load the yaml package → unable to change the run number → all the runs have the same run number, run1
- The yaml package is exported in setup.sh