



Asymptotic Limit Setting in CMS

Tambe E. Norbert

`norbert@physics.umn.edu`

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Motivation



- Quick computation of limits.
- Study systematic effects.
- Extract experiment sensitivity with ease.
- Quantify statistical significance of a signal.

Hypothesis Compatibility with Data?



CLs Technique



Past Week

- 1 GMSB/GGM MC samples for final limit setting
- 2 Limit setting with systematics.
- 3 Making standard CMS style plots.
- 4 Writing Thesis

Plans

- 1 Producing MC samples for GGM
- 2 Limit with HybridNew Setting.
- 3 Make Analysis slides/Writing Thesis.
- 4 Update Analysis note with new plots.



Test Statistics Distribution



Finding significance involves Monte Carlo calculations \Rightarrow computationally expensive.



Systematics



Approximate formula of the test statistics distribution is analytically computed. Use Monte Carlo methods to determine distribution of the test statistics.



Delayed Photon Upper Limit

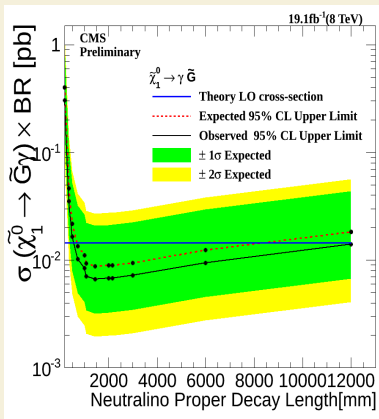


Figure : HYBRIDNEW

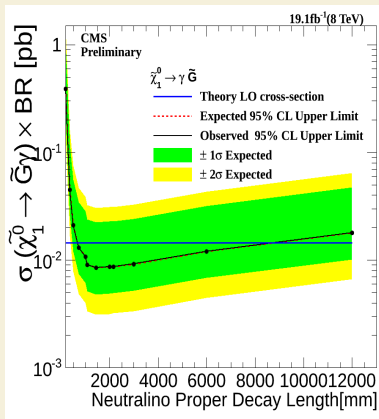


Figure : ASYMTOTICS