

# Prospects in the search for top partners

Matteo Abis  
matteo.abis@cern.ch

Università di Padova

March 12, 2012

# Goal statement.

Conclusion and refinement of the analysis of top partner events.

$T\bar{T} \rightarrow \ell\ell + n \text{ jets.}$

- validate the MC samples;
- import the existing analysis into the CMGTools framework;
- refine the analysis with razor-like variables.

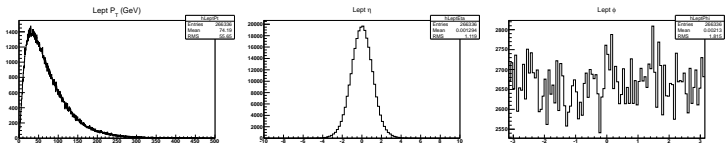
# Validation of the MC samples.

- bugs in the older samples;
- independent crosscheck of LHE files;
- thank you Aram for the new samples and validation;
- fast or full simulation at some point.

# Validation of the MC samples.

This is happening as we speak.

from file: /castor/cern.ch/user/a/avetisya/TopPartners  
/NewSampleTest/PostProc\_T53\_PairProd\_400.lhe.gz



# Importing the analysis into the CMGTools framework.

- work done by Massimo Nespolo with his own framework;
- reconsider and refine cuts, particle identification.
  - using standard collections `cmg::Electrons, Muons...`;
  - MET?
  - *b* tagging?

## Future enhancements: razor variables.

- already employed in the search for supersymmetric particles;
- asymmetric nature of the event!