

## Physics Analysis:

- Studies based on the Randall-Sandrum model of extra dimensions.
- Here I will provide the necessary information about the physics analysis I am planning to perform with ATLAS data. A more detailed description will be provided ASAP. but for now, I will upload information related to validation plots of the Radion decay using Pythia.
- Here are few of the validation plots: RadionValidationPlots-v1.pdf
- The scripts used to generate these decay modes are:
  - ◆ For the 2b2tau decay mode and  $\text{ksi} = 0.0$  : RSRadion.MR300\_LAM3000\_2tau2b\_ksi0.0.py.txt
  - ◆ For the 4b decay mode and  $\text{ksi} = 0.0$ : RSRadion.MR300\_LAM3000\_4b\_ksi0.0.py.txt
  - ◆ For the 2b2tau decay mode and  $\text{ksi} = -0.1$  :  
RSRadion.MR300\_LAM3000\_2tau2b\_ksi-0.1.py.txt
  - ◆ For the 4b decay mode and  $\text{ksi} = -0.1$ : RSRadion.MR300\_LAM3000\_4b\_ksi-0.1.py.txt
  - ◆ For the 2b2tau decay mode and  $\text{ksi} = -0.2$  :  
RSRadion.MR300\_LAM3000\_2tau2b\_ksi-0.2.py.txt
  - ◆ For the 4b decay mode and  $\text{ksi} = -0.2$ : RSRadion.MR300\_LAM3000\_4b\_ksi-0.2.py.txt
- The suggestion for official production is to use the cases where,  $\text{ksi} = 0.0$  and  $\text{ksi} = -0.1$ .
- The total and partial cross-sections are given in this file: partialCrossSections.txt.

-- ChaoukiB - 10 Nov 2008

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This topic: Main > ChaoukiRadionStudies

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