An Additional Tool for the Inverse Problem: Online Signature Reference

http://lhcsigs.physics.lsa.umich.edu

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with
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LHC New Physics Signatures Workshop

The Need for Additional Tools

- The years leading up to the LHC saw creation of myriad new BSM physics scenarios.
- Some predict spectacular, unusual signatures. Others are subtle. Often different models have identical signatures.
- Until recently, relatively little progress towards identification / distinguishability.
- Identifying Nature at the LHC probably not an easy task!
- The more tools available... the better!

A Start: An Online Reference

An example of how this could work:
`http://lhcsigs.physics.lsa.umich.edu`

Some Benefits of a Signature Reference

Before LHC Data is Reported:

- Assist model-builders assess the potential for observability of their scenario.

- Aid phenomenological studies of existing models that have not been fully analyzed.

- A resource for experimentalists to learn about less well-known, or unusual signatures, as well as new physics scenarios.

After LHC Data is Reported:

- First and foremost: Hastens identification of new physics

- Highlight additional regions of parameter space to explore, and motivate new experimental studies

A Few Final Remarks

- The WIKI format allows anyone to quickly add signatures, or change information
- From this modest start, we intend on expanding as far as is useful.
- Please contact me for more information.

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- Those interested in learning more and/or participating, meet in the "Fishbowl" (3246 Randall) at 11am, tomorrow.