

# A model-independent general search for new phenomena with the ATLAS detector at $\sqrt{s} = 13$ TeV



### SOMEWHERE IN THEORY SPACE...

not yet thought of theories

extra dimensions

SUSY

MSSM

PMSSM

MSUGRA

Little Higgs

Axions

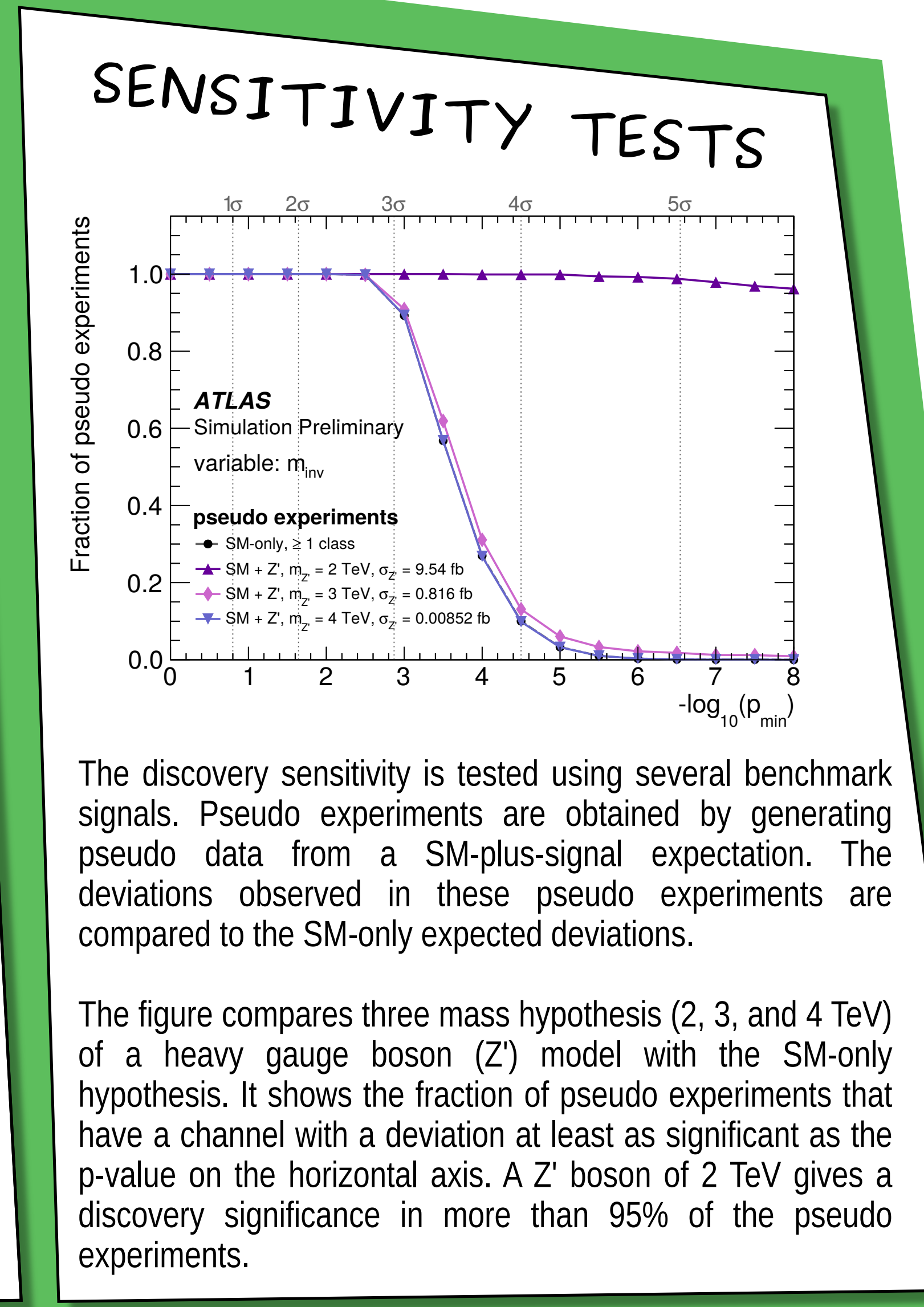
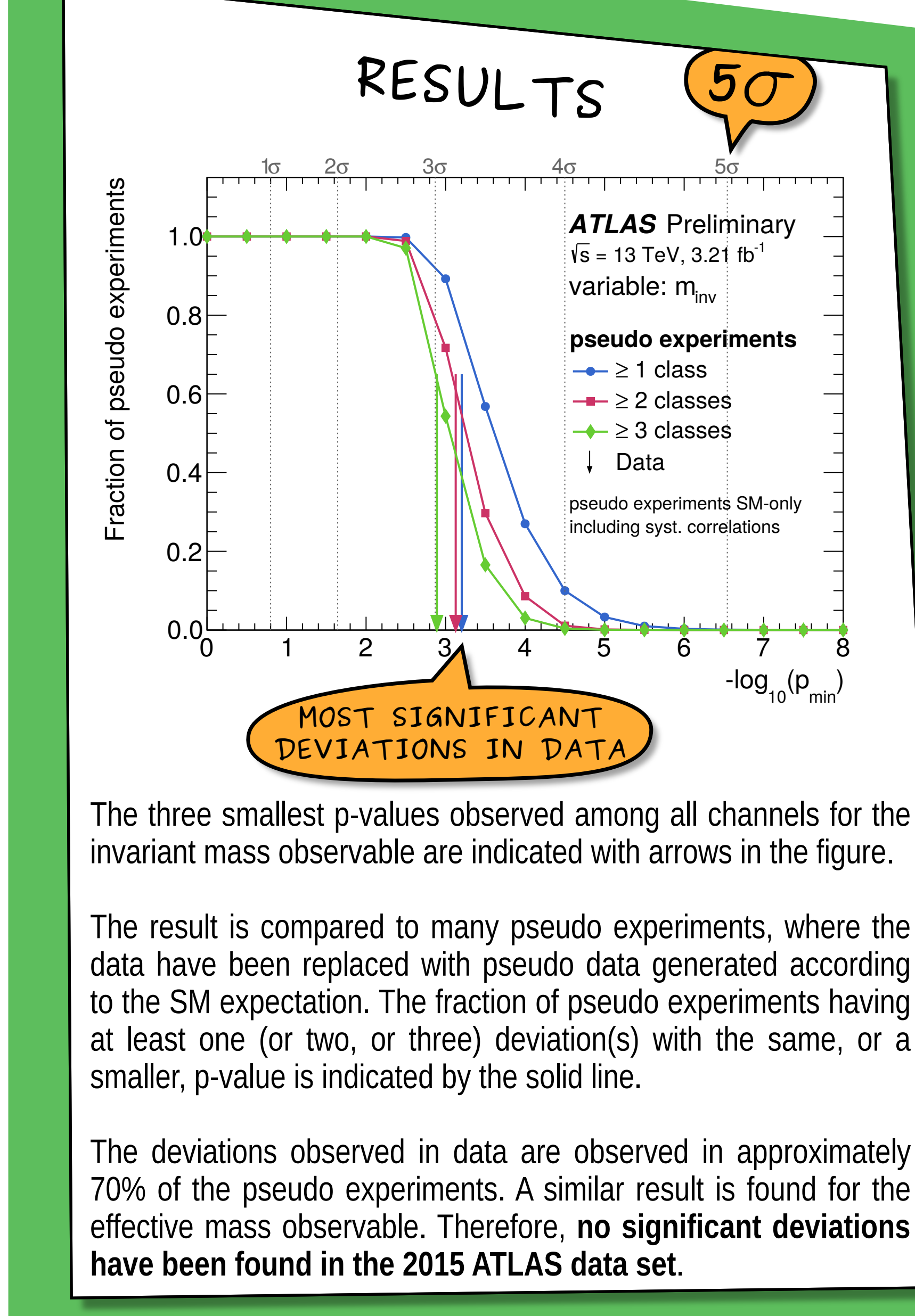
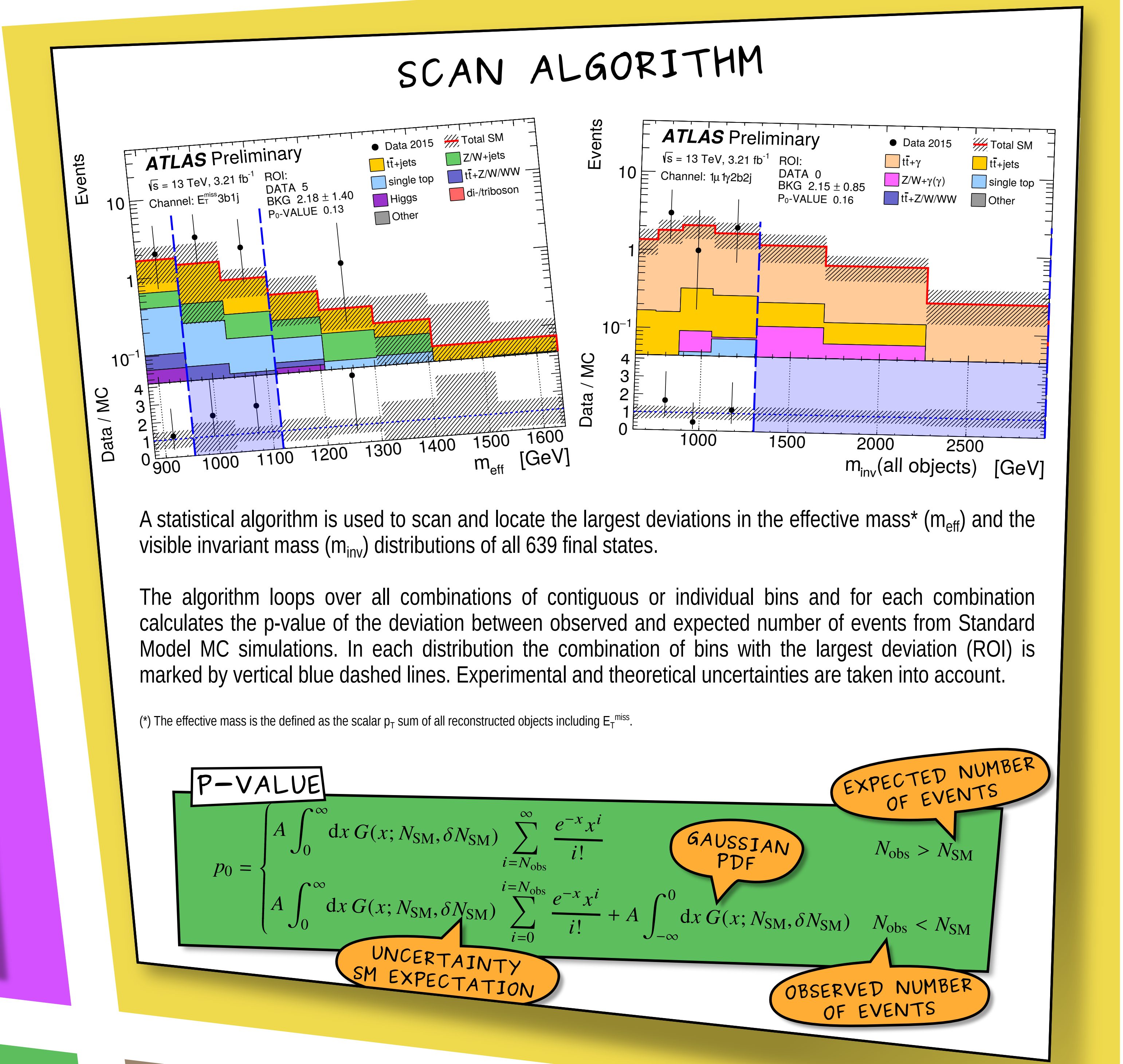
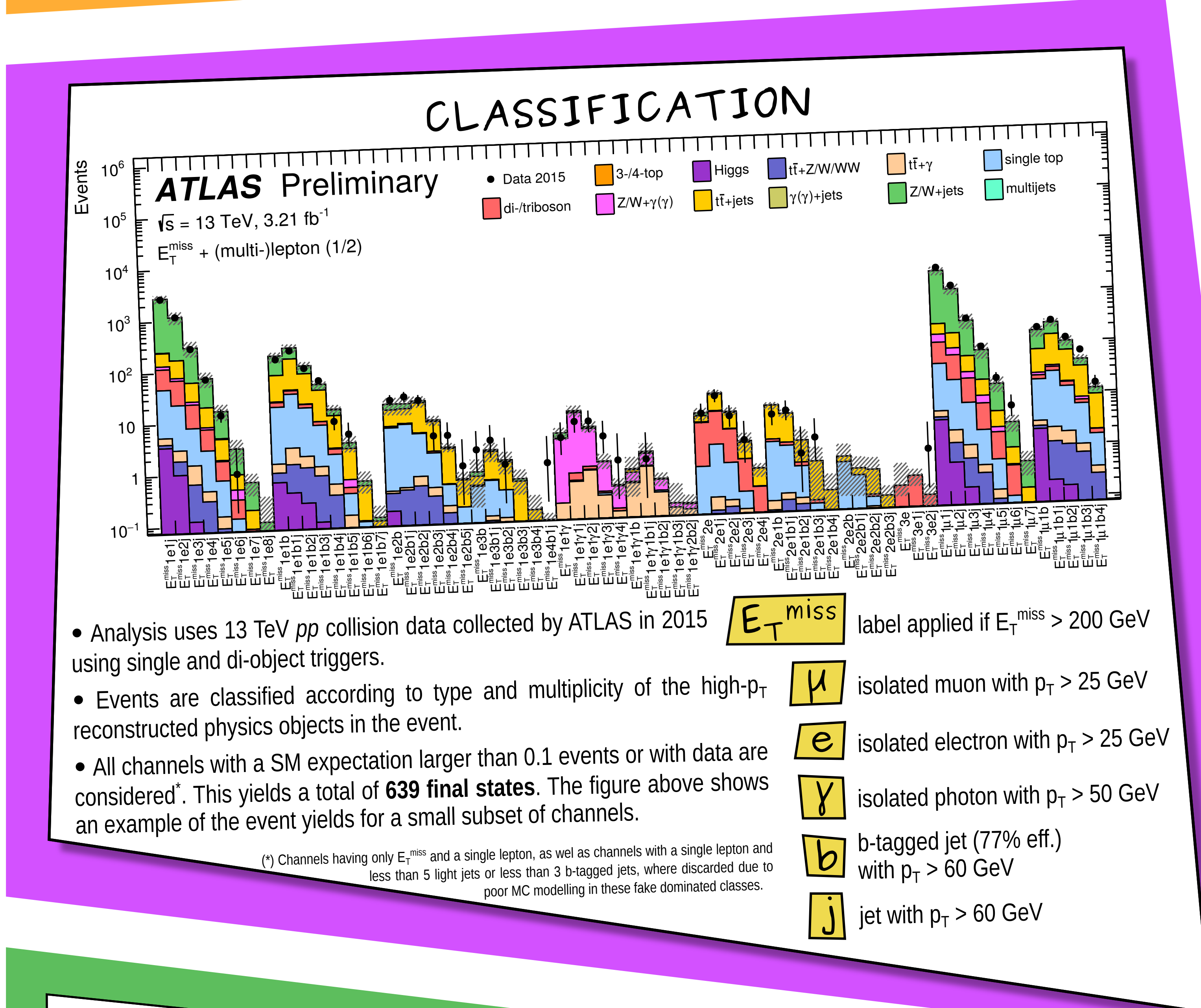
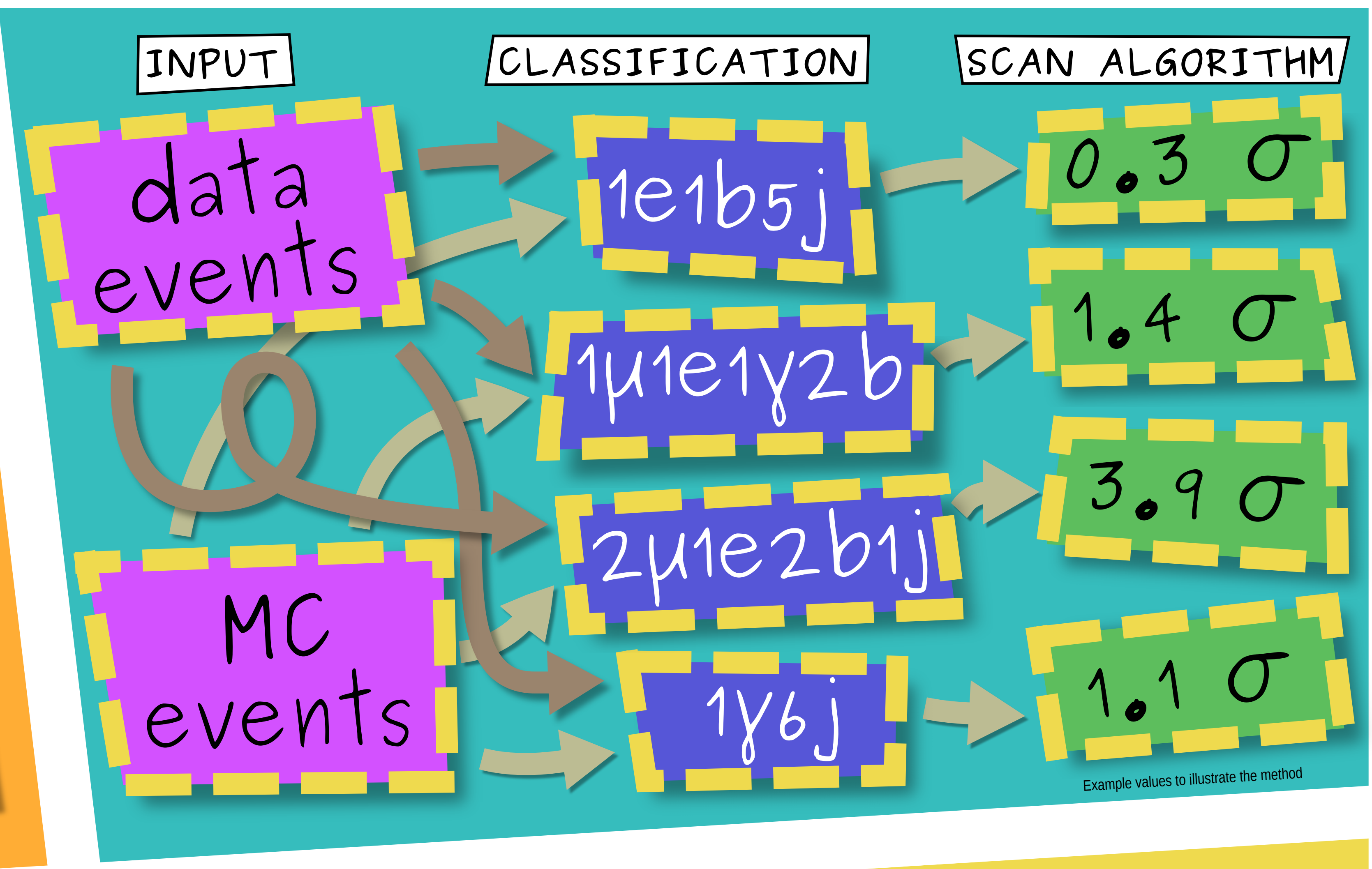
Are we here? ...or here? ...or here?

### New Physics?

While testing our knowledge of nature with the LHC, nature might reveal new physics anywhere in the wide-range of physics beyond the Standard Model (BSM). Beyond the Standard Model (BSM) theories we have, or have not yet thought of. It is impossible to cover the numerous possibilities for nature to reveal new physics with dedicated searches. To avoid missing a BSM signal we need:

### A MODEL INDEPENDENT SEARCH TOOL

- An automated systematic search for deviations from the SM expectation (from MC simulations) is performed in all accessible final states.
- A statistical search algorithm is used to identify the largest deviation in distributions sensitive to new physics.



Find out more about this analysis

ATLAS-CONF-2017-001

<https://cds.cern.ch/record/2243494>