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## Hiding and Finding New Physics in Cosmic Ray Air Showers

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The composition of the primary particle in cosmic ray air showers is of general interest. Measuring the penetration depth of showers allows for template fits of this composition. We use simple generic new physics models to compare the penetration depth distribution of new physics versus primary composition. We argue that complementary information is needed to disentangle these effects and show our findings for the number of muons reaching the ground.

### Summary

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