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Feasibility Studies on improved Proton Energy Reconstruction with IACTs

Alicia Fattorini*, Wolfgang Rhode, Dominik Elsaesser, Max Noethe, Dominik Baack

Department of Physics, TU Dortmund University
Otto-Hahn-Str. 4, 44227 Dortmund, Germany

***E-mail: alicia.fattorini@tu-dortmund.de**

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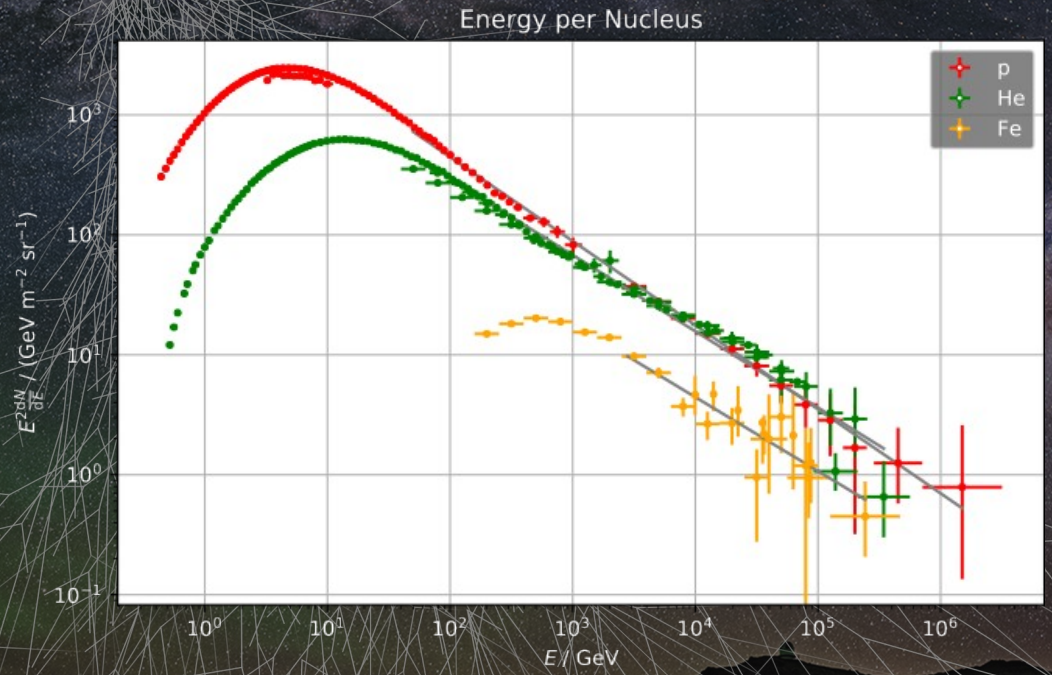

MONTE CARLO SIMULATIONS

- Provided by the MAGIC collaboration
- Three particle types: protons, helium and iron nuclei

python™

scikit learn

AICT-TOOLS

- Reconstruction tool, especially for IACT data
- Open-source Python Project
- Based on scikit-learn modules
- Developed at the TU Dortmund

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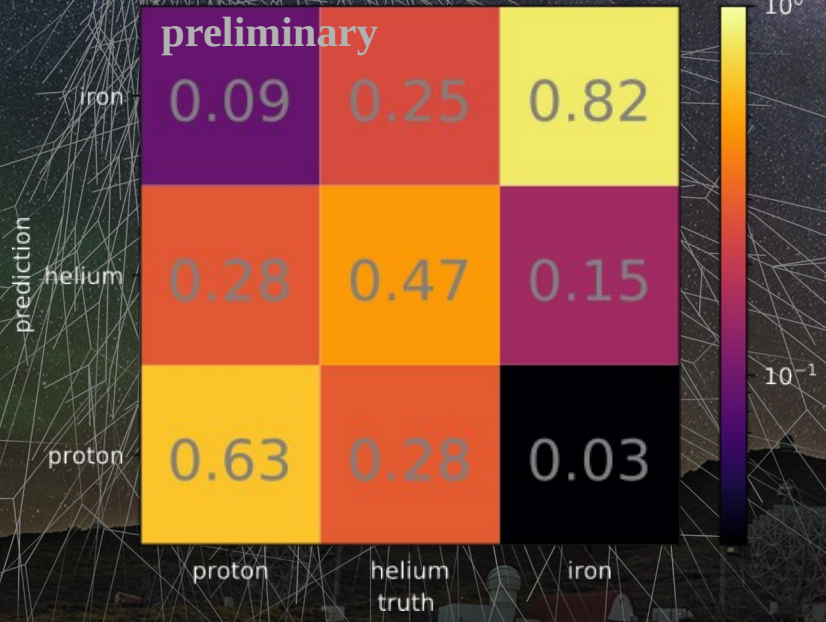
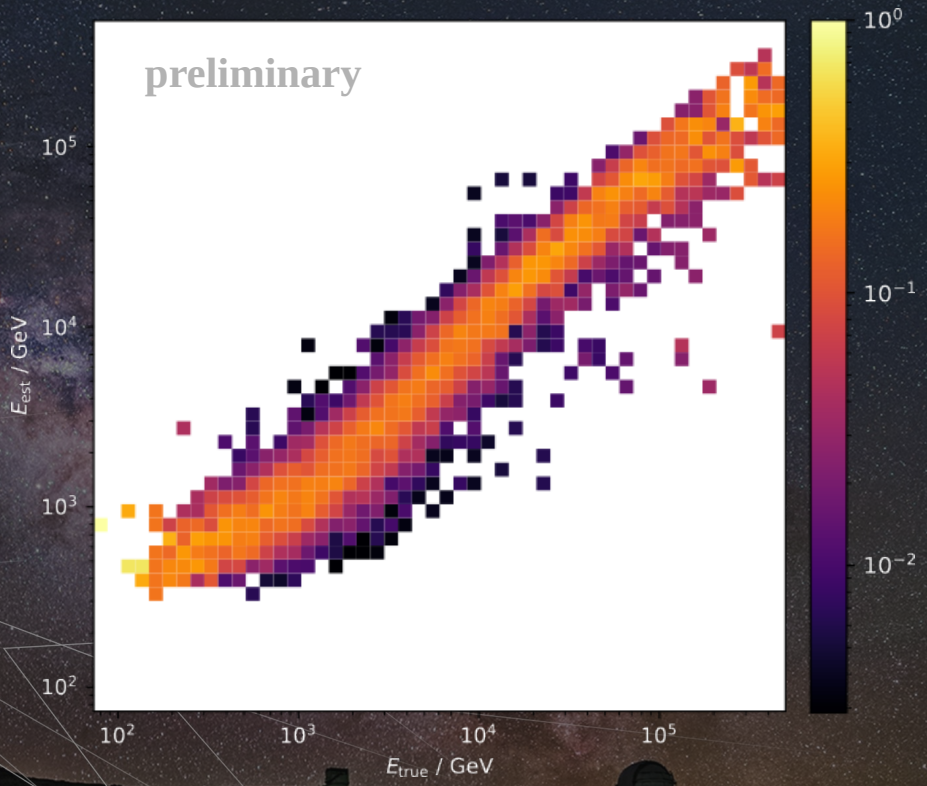
PARTICLE IDENTIFICATION

Two random forests
1. Separate iron from rest (Ironess)
2. Separate helium from rest (Heliumness)





PROTON ENERGY REGRESSION

One random forest for each particle type