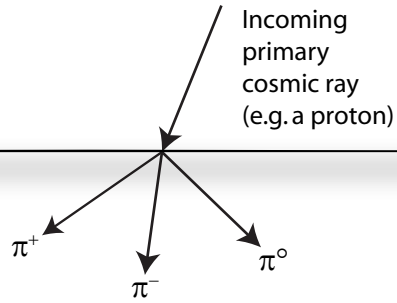


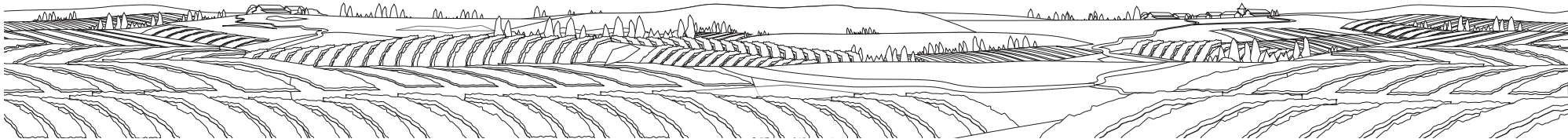
Cosmic Ray Showers

a theoretical simulation

Atmosphere



Typical length a particle travels before decaying or hitting an air molecule



The Particles

- π a pion, combination of 2 quarks
- π^+ a positively-charged pion
- π^- a negatively-charged pion
- π^0 a neutral pion
- π^\pm a positive or negative pion
- μ^\pm a muon, like an electron but heavy
- ν_μ a muon neutrino
- γ a gamma ray (high-energy light)
- e^- an electron
- e^+ a positron (anti-electron)
- e^\pm a positron or an electron

Reaction Rules

