

**TAMBO**

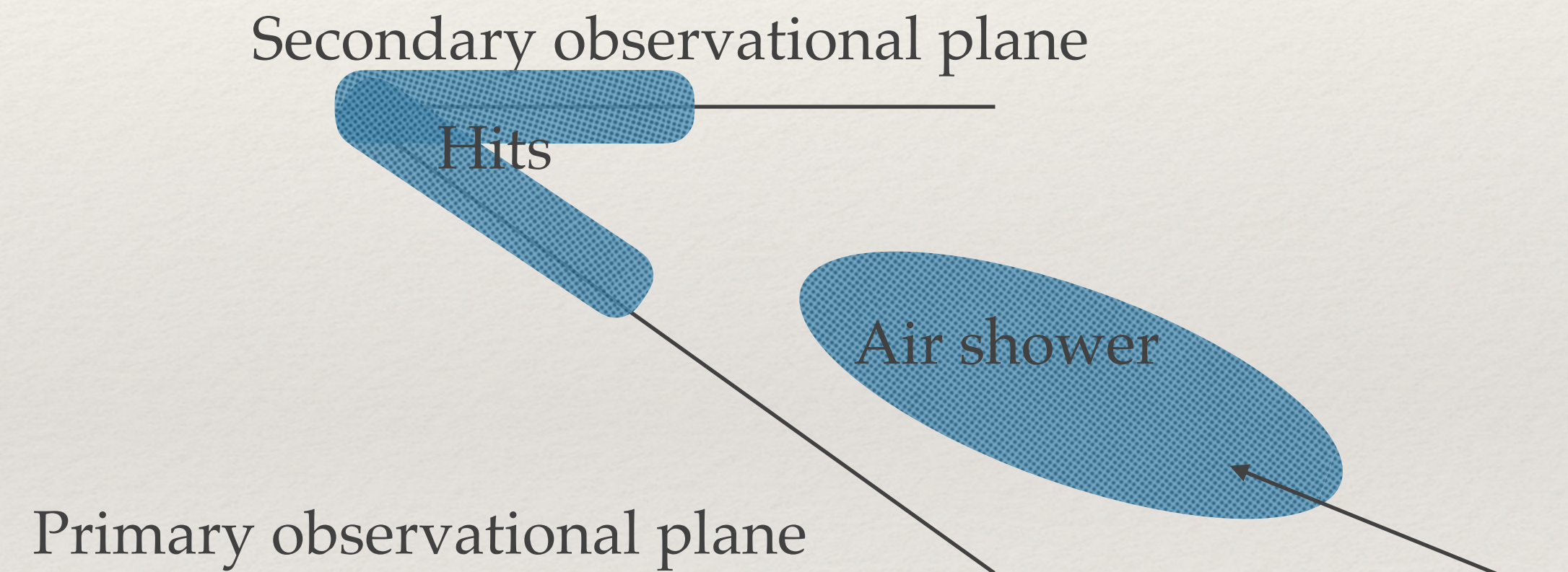
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Pavel Z. for TAMBO collaboration with Jeff  
L. And Will T.

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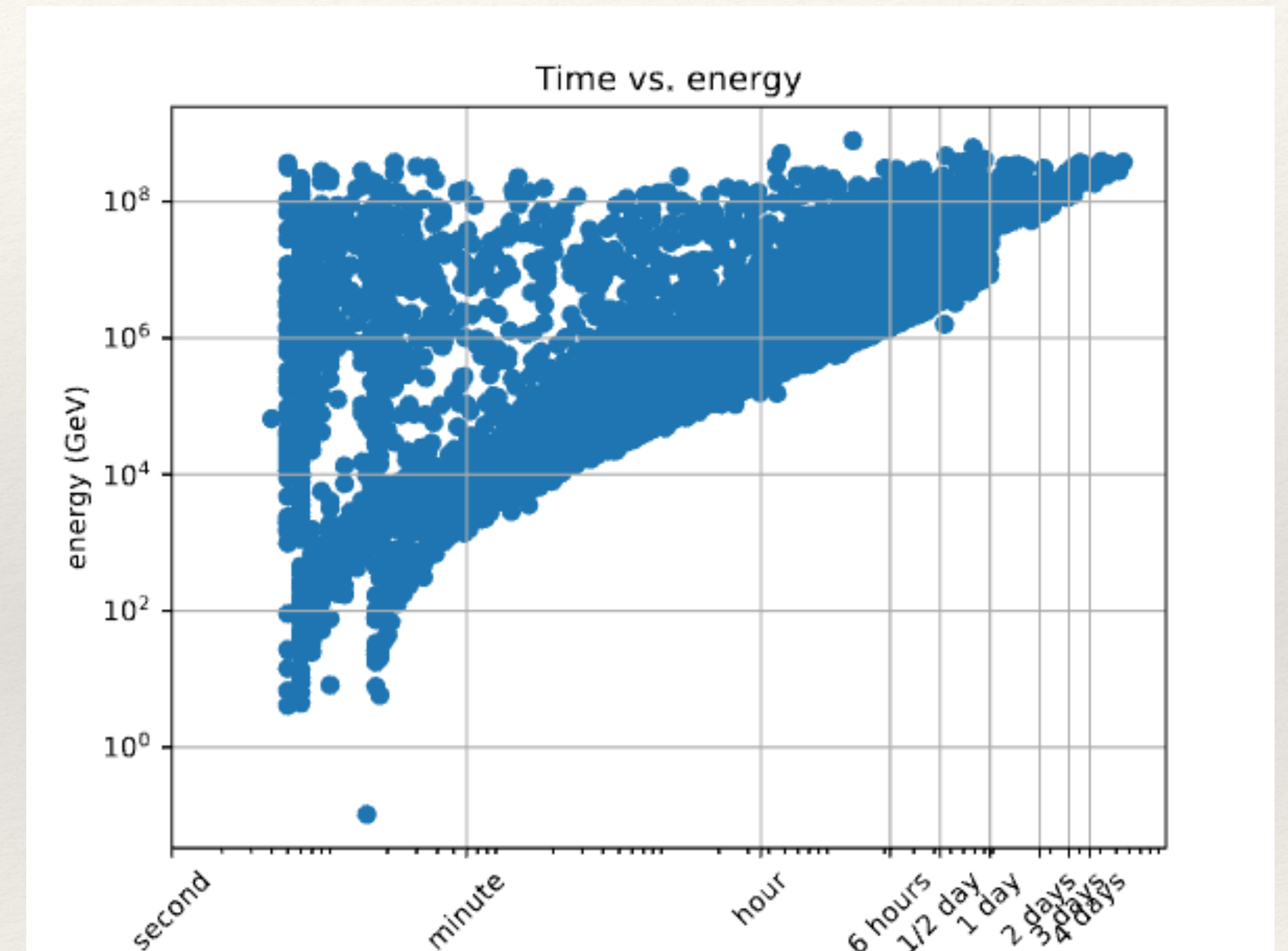
# Overview of what we are doing

- ❖ Applying 1 GeV E cuts to hadrons, muons and EM particles for each shower
- ❖ Have thinning at  $1e-6$  of primary particle energy
- ❖ Max weight = 0
- ❖ Have a obs plane above angled plane to capture particles that exceed physical altitude



# Still too long

- ❖ Showcasing run time using `os.path.getctime()`
- ❖ Dip at 1 day comes from time limit I set on first pass at running jobs
- ❖ I take the jobs that don't terminate in one day and I send them to a partition that allows me to run jobs for 7 days
- ❖ A handful of those still didn't finish



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# Suggestions?

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- ❖ We want to optimize the E-cuts with runtime
- ❖ NKG parameterization has been done previously and we would like to avoid that if possible
- ❖ We would like to get timing information so that we can simulate triggering
- ❖ Currently our rates are off by several orders of magnitude from NKG parameterization

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# Backup

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# What is TAMBO

- ❖ Tau Air-shower Mountain Based Observatory (TAMBO)
- ❖ Colca Valley, Peru
- ❖ Tau neutrinos interact inside Earth, produce tau lepton which decays in air, inside valley
- ❖ Record air showers via scintillator panels / water tanks

