

The background features abstract, overlapping green geometric shapes in various shades of green, creating a modern and dynamic visual effect. The shapes are primarily triangles and polygons, some solid and some semi-transparent, arranged in a way that suggests movement and depth.

Hawc Meeting

March 15th, 2018

Brendan Boyd

Looking at PEs in individual tubes

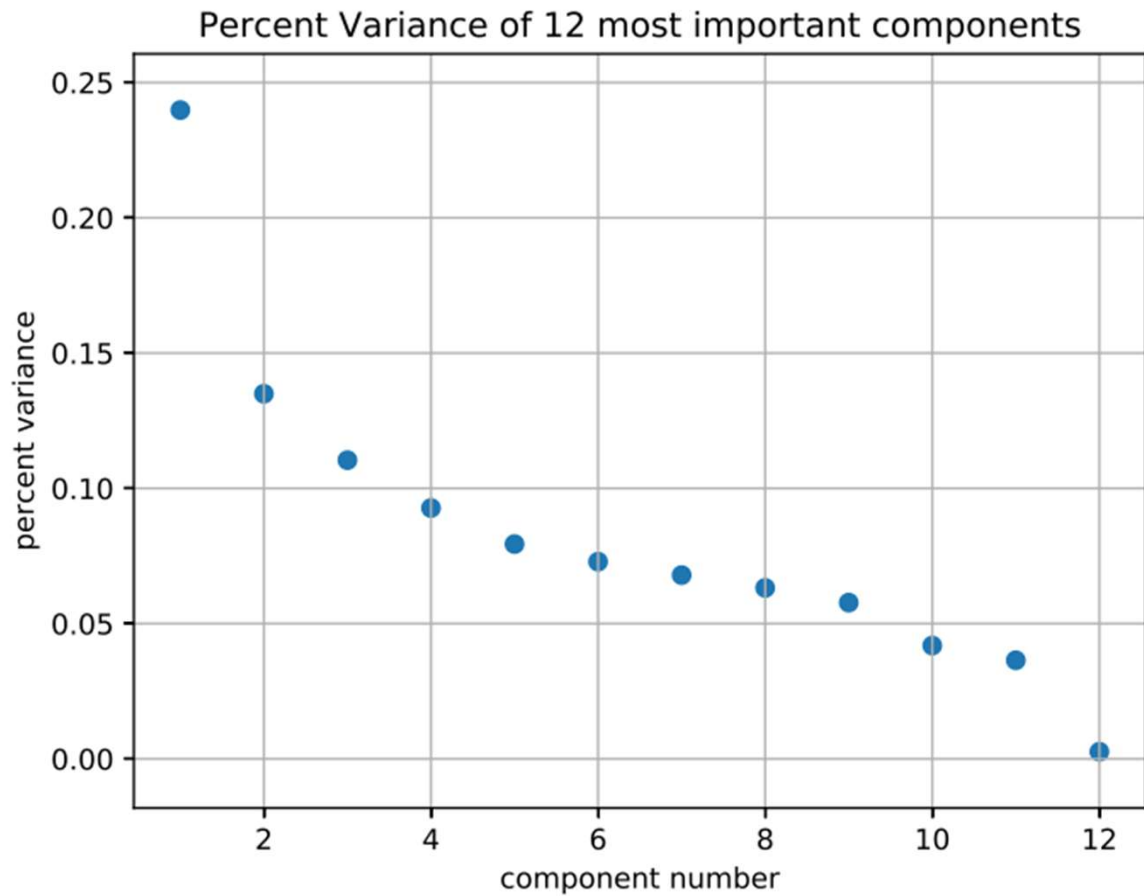
- ▶ Talked with Sam about this and the data right now does not have the information to do this but there are ways to get it that aren't too hard
- ▶ Mc or data



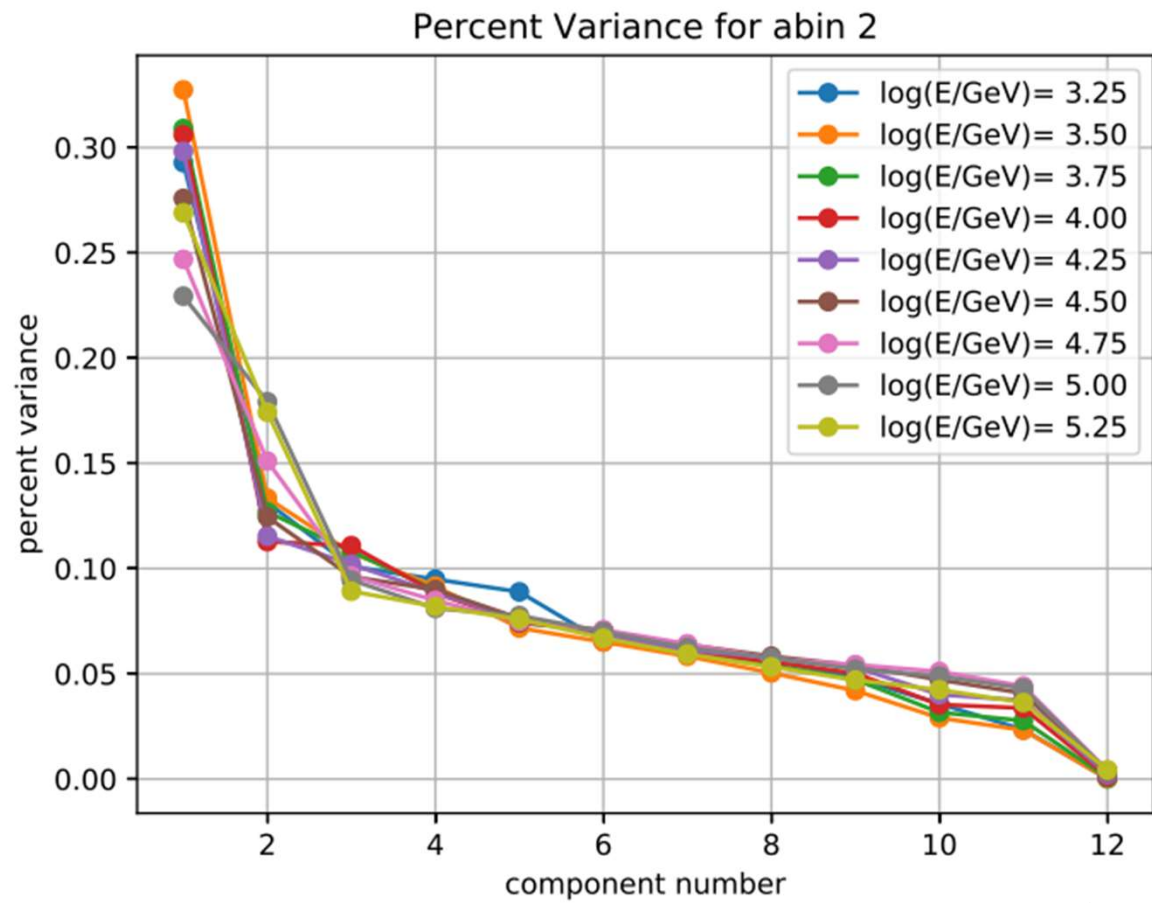
PCA analysis

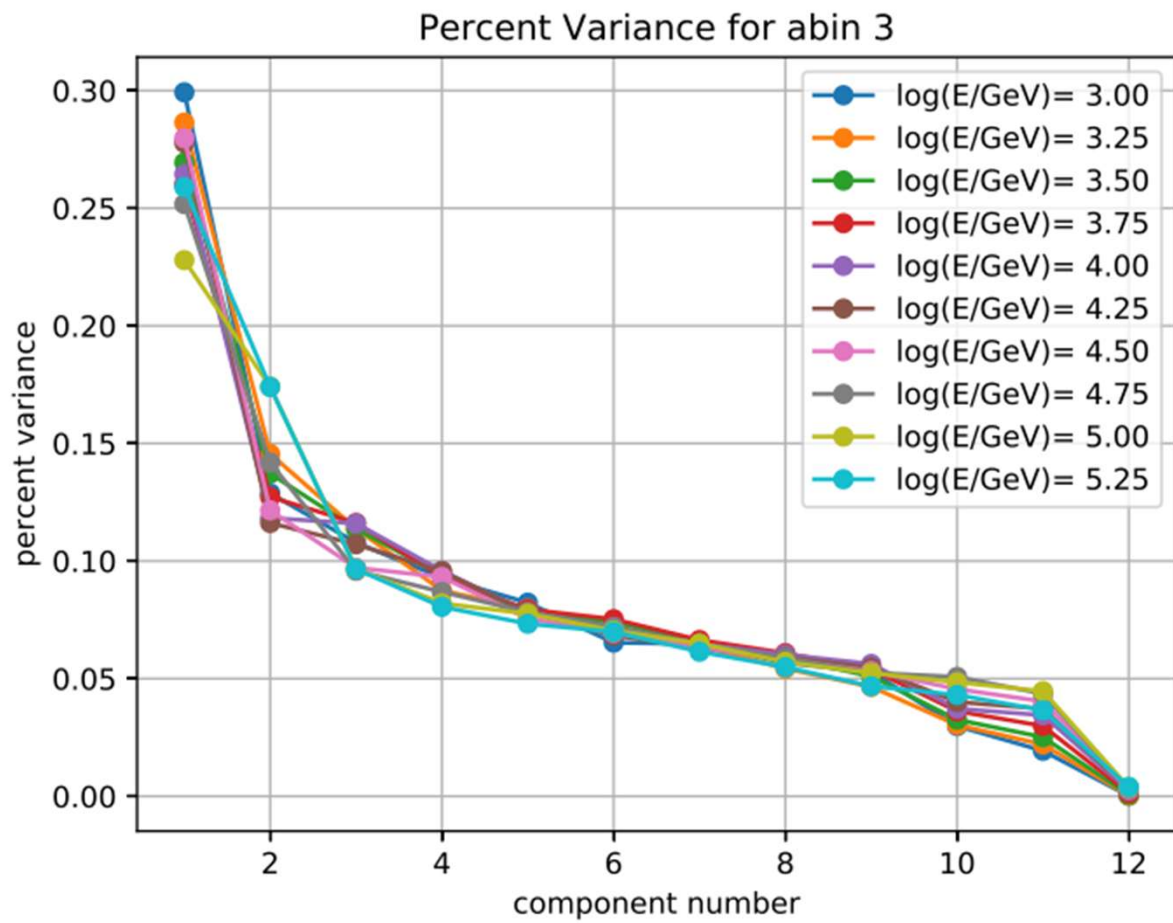
- ▶ Used pca tools from `sklearn.decomposition`. Plotted percent variance for all components
- ▶ Input File
 - ▶ `data/scratch/userspace/samm/data/data/daqsim-4/data-bkg.xcd`
- ▶ Quality cuts
 - ▶ `rec.coreFiduScale <= 100`
 - ▶ `rec.nChAvail >= 700`
 - ▶ `rec.coreFitStatus == 0`
 - ▶ `rec.angleFitStatus == 0`
 - ▶ `rec.zenithAngle < 0.785`

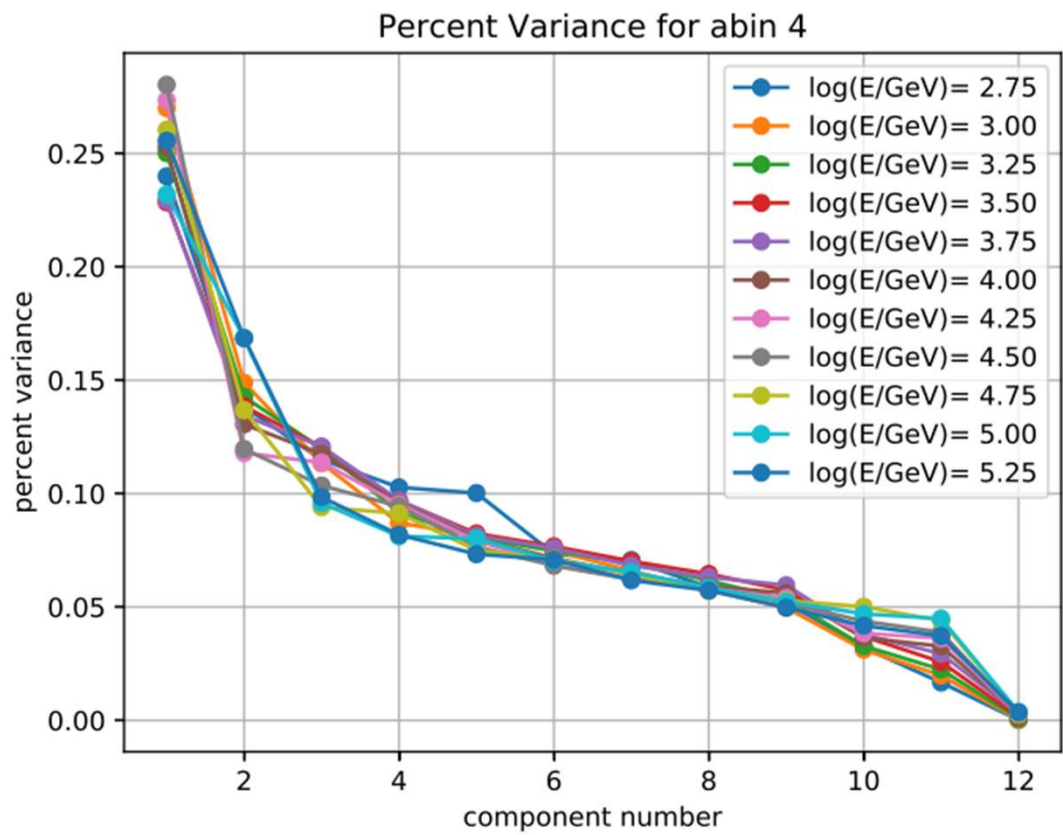
Whole data file (no binning)

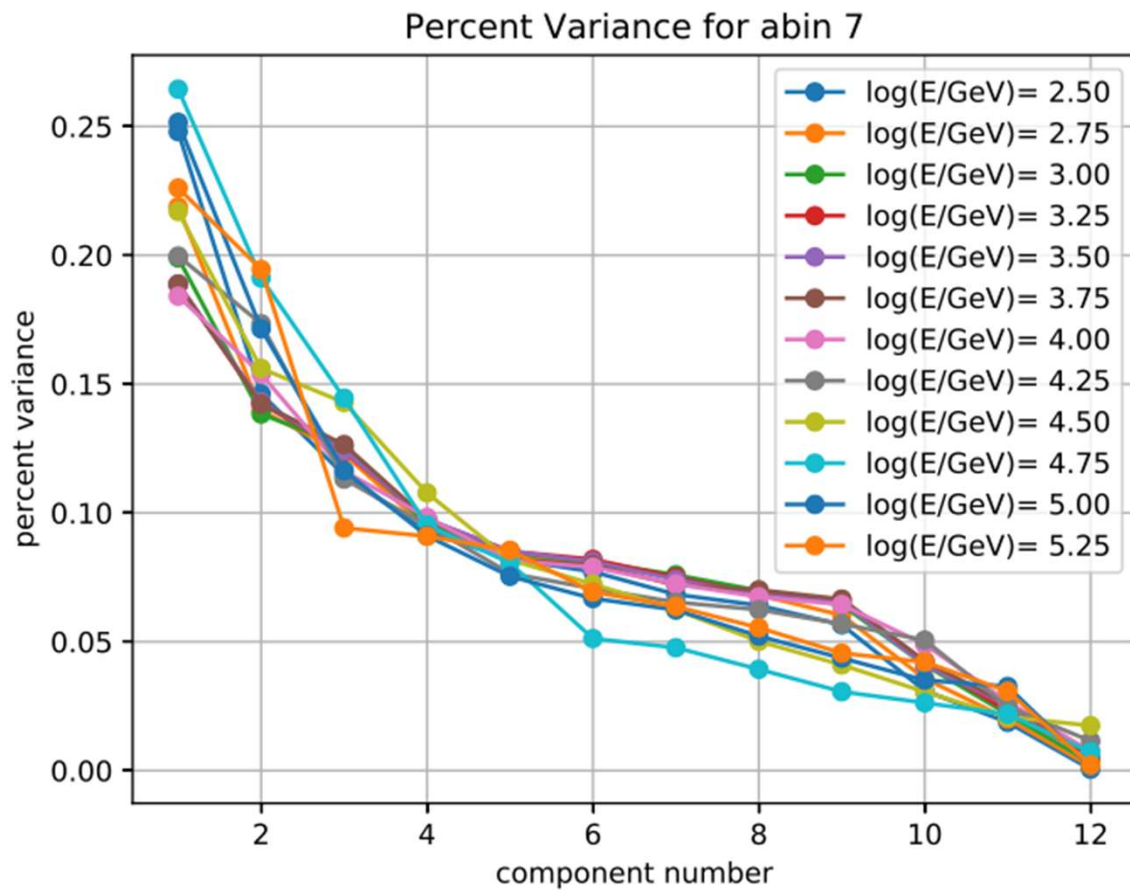


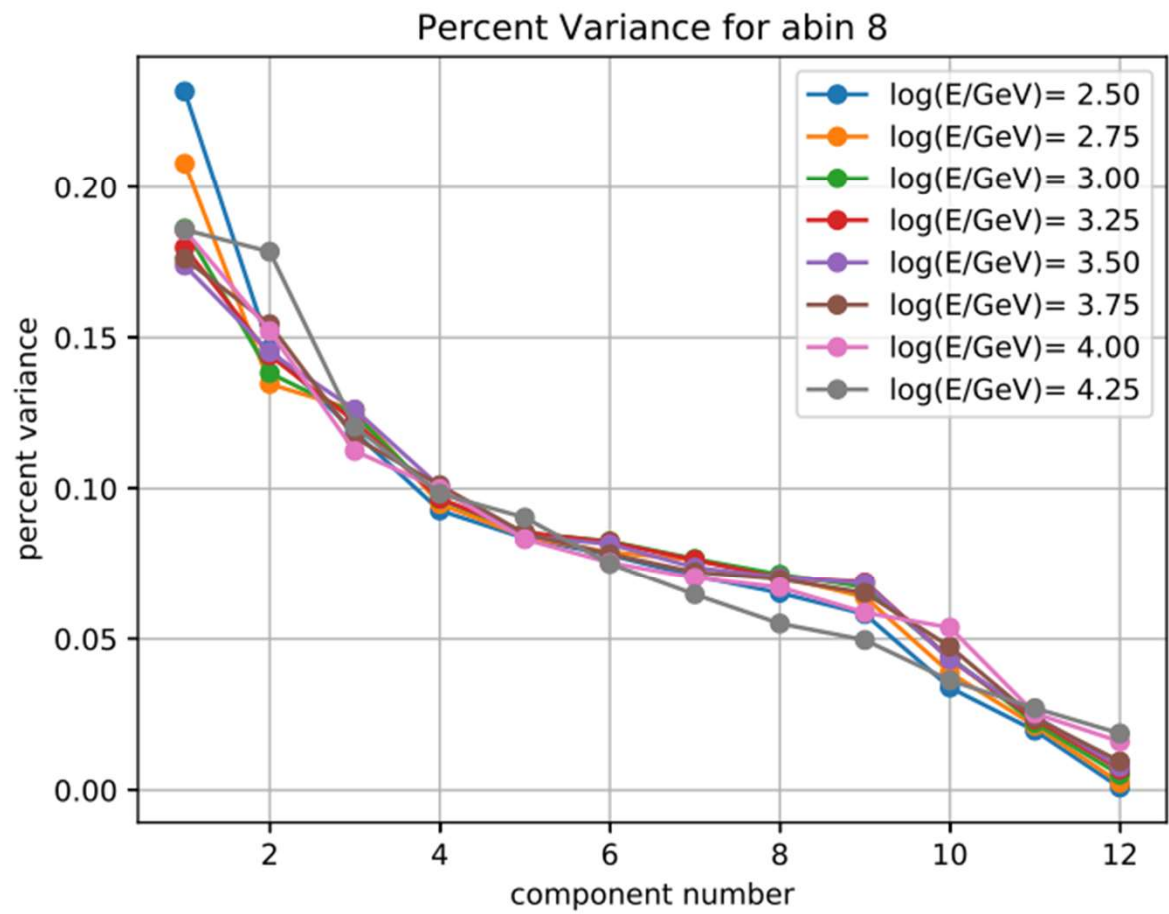
Fraction of variance attributed to each principle component

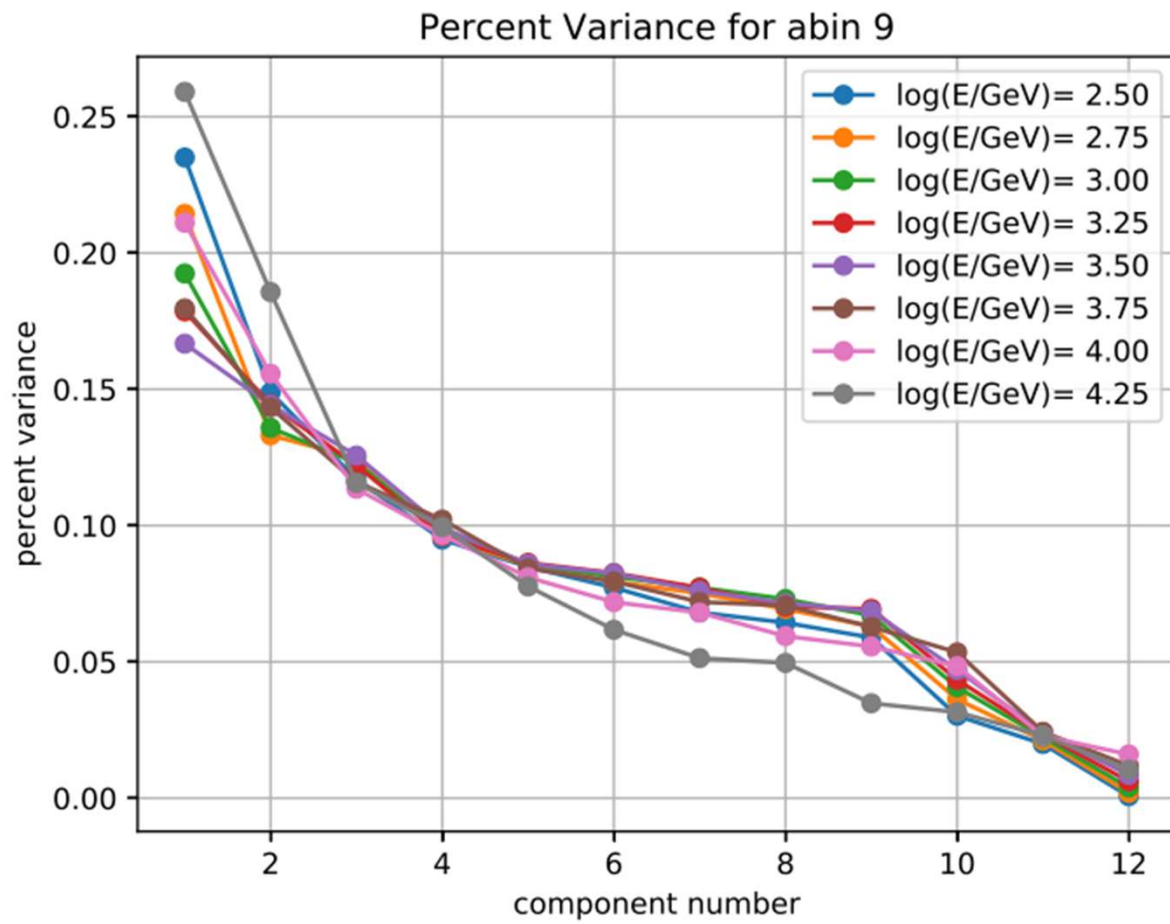












Next Steps

- ▶ Get file made to look at hits in individual tubes
- ▶ PCA
 - ▶ Decide how many to use
 - ▶ Incorporate jet cluster variables

