Simulations

- Performance of CTA will be determined by its angular resolution, energy resolution, and sensitive field of view
- Dependent on a large number of technical and design perimeters
  - general layout with telescope size and locations, telescope optics, camera field of view and pixel size, signal shapes and trigger logic
  - Interconnected either technically or by cost
  - Learn from Previous IACTs
- Monte Carlo Work Package (MCWP)
- Using standard image parametrisation and *Multi-Layer Perceptron (MLP)* neural network for background rejection to estimate sensitivity.
CTA configE differential flux sensitivity: 50.0 hour exposure

- Durham - Standard analysis with MLP
- MPIK analysis - Standard analysis with shape-cuts
- IFAE analysis - MAGIC analysis with Random Forest
- DESY analysis - Standard analysis with BDT
- Paris analysis - 3D-analysis with BDT
- HEGRA Crab spectrum
- milliCrab level
Why am I here?

- Dark Matter searches – substructure.
- Analysis of the angular power spectrum of anisotropies
- Look at Fermi Data and simulation data to extrapolate to possibilities with CTA
Questions?