

# Explanation of HiggsJetSimple

This is a fat jet containing the decay products of a simulated Higgs Boson in a 'ttH' event.

- 1 The first step is to produce a [text file containing information on the energy deposits](#) in a simulated event containing a Higgs Boson and two top quarks (ttH).
- 2 Energy is deposited in cells within the calorimeters (energy measurement detectors). When there is a lot of energy clustered together in a certain way, we call this a jet.
- 3 This jet contains energy deposited in cells by the particle produced in the decay of a Higgs Boson.
- 4 Each cell corresponds to a note. Basically:

- The [pitch](#) of the note is determined by the cell's [distance \(dR\) from the axis of the jet](#).
- The [amplitude](#) of the note is determined by the [amount of energy](#) deposited in the cell.
- Notes are played in sequence according to their distance from the interaction point at the heart of the detector.



[click to play HiggsJetSimple.mp3](#)