

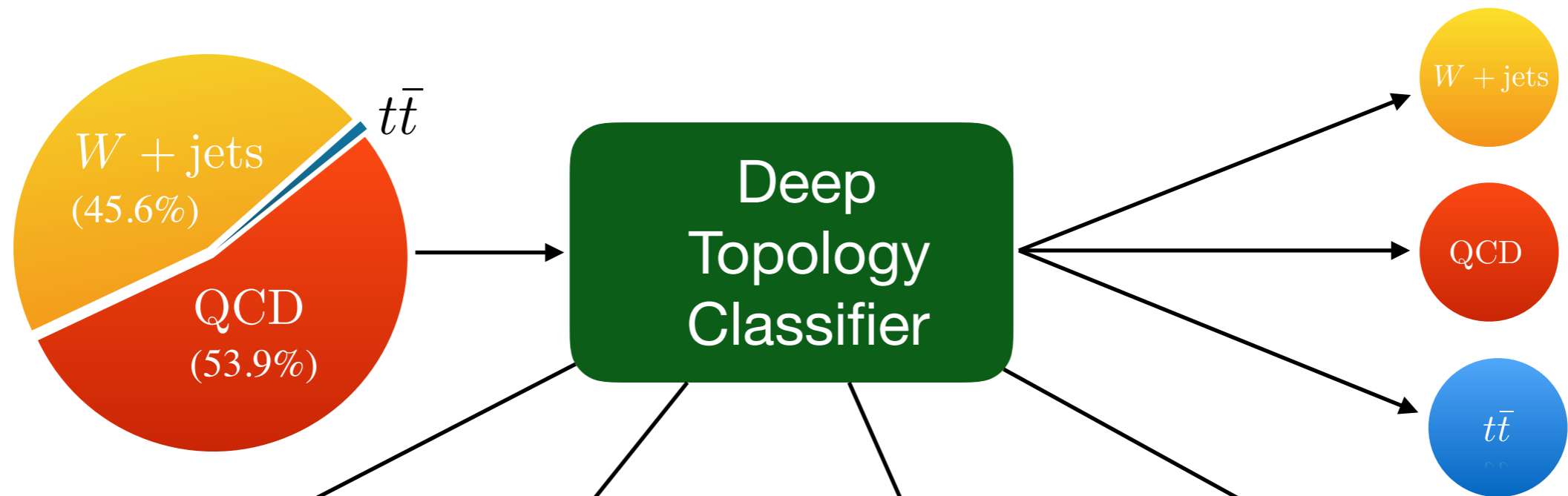
# DISTRIBUTED TRAINING FOR HYPERPARAMETER OPTIMIZATION

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# PROBLEM



## Raw Calo Image Classifier

A sequence of particles taken as input to a recurrent NN.

## Particle Sequence Classifier

A sequence of particles taken as input to a recurrent NN.

## Abstract Image Classifier

Based on an abstract representation of the reconstructed particles as an image to feed to a convolutional NN.

## High-level Feature Classifier

Use high-level features as inputs to a fully connected NN.

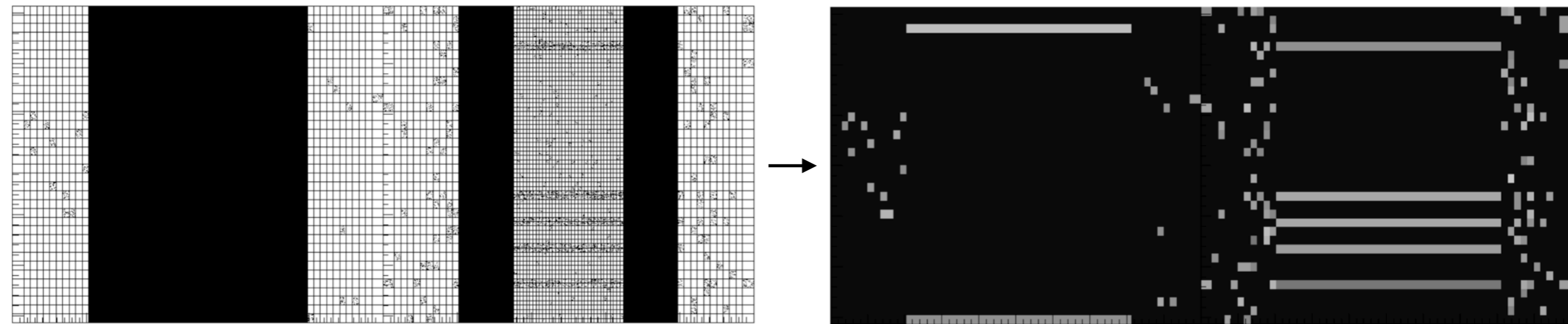
## Deep Topology Classifier

W + jets

QCD

$t\bar{t}$

# HYPER-PARAMETER OPTIMIZATION



- Use skopt library <https://scikit-optimize.github.io/>
  - Bayesian optimization
  - Get f.o.m from sub-master
  - Generates new model
- Communicate to nodes the new model configuration.

