Urgent simulation needs for EEEMCal

Motivation: need to make progress on services (eg. cooling, gain monitoring system…) and readout electronics

1. Requirement on gain stability to achieve a ~1% constant term
   - Single particle simulations:

     study σ/E vs E with different uncorrelated mis-calibration coefficients in each crystal

2. Requirement on readout linearity
   - Single particle simulations:

     study resolution simulating different levels of non-linearity

3. Requirement on 2-peak resolution (eg. background rates)
   - DIS and background events:

     study rates per crystal (as a function of η)

4. Minimal energy threshold required (per cluster/per tower)
   - Single particle simulations:

     energy resolution and detection efficiency assuming different energy thresholds per crystal (see Sasha's presentation on Aug 9)