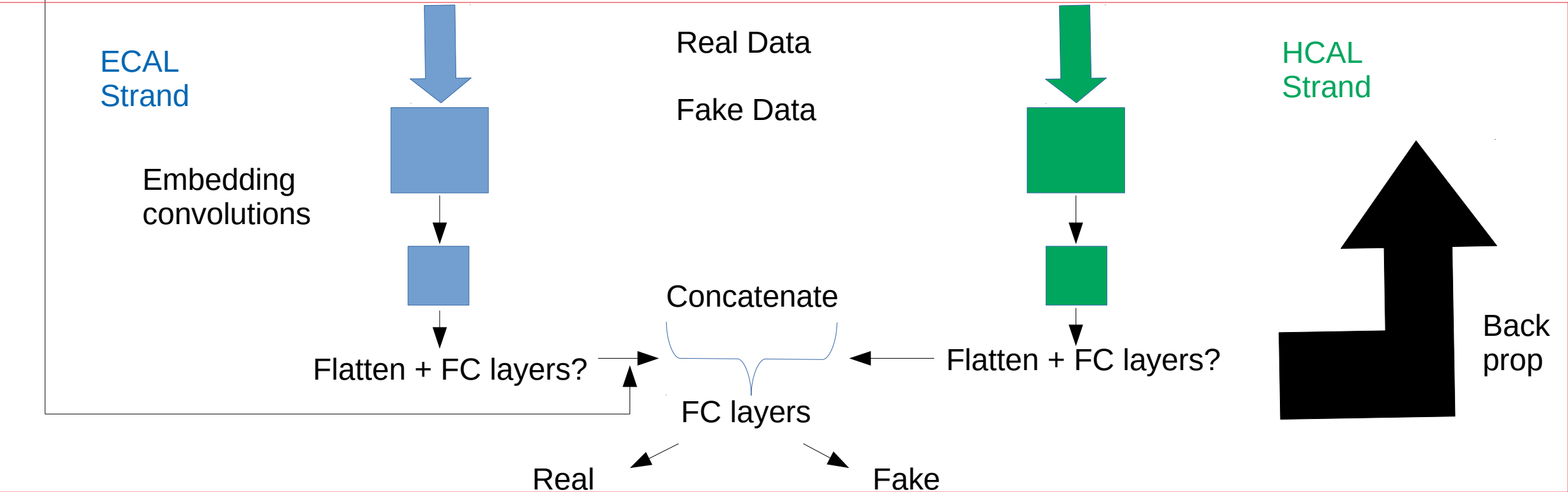
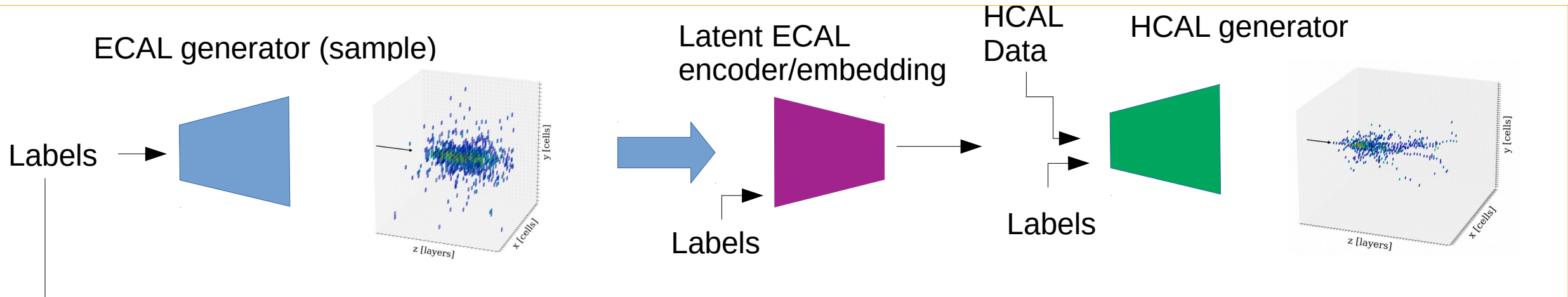


The ECAL+ HCAL problem + General work update

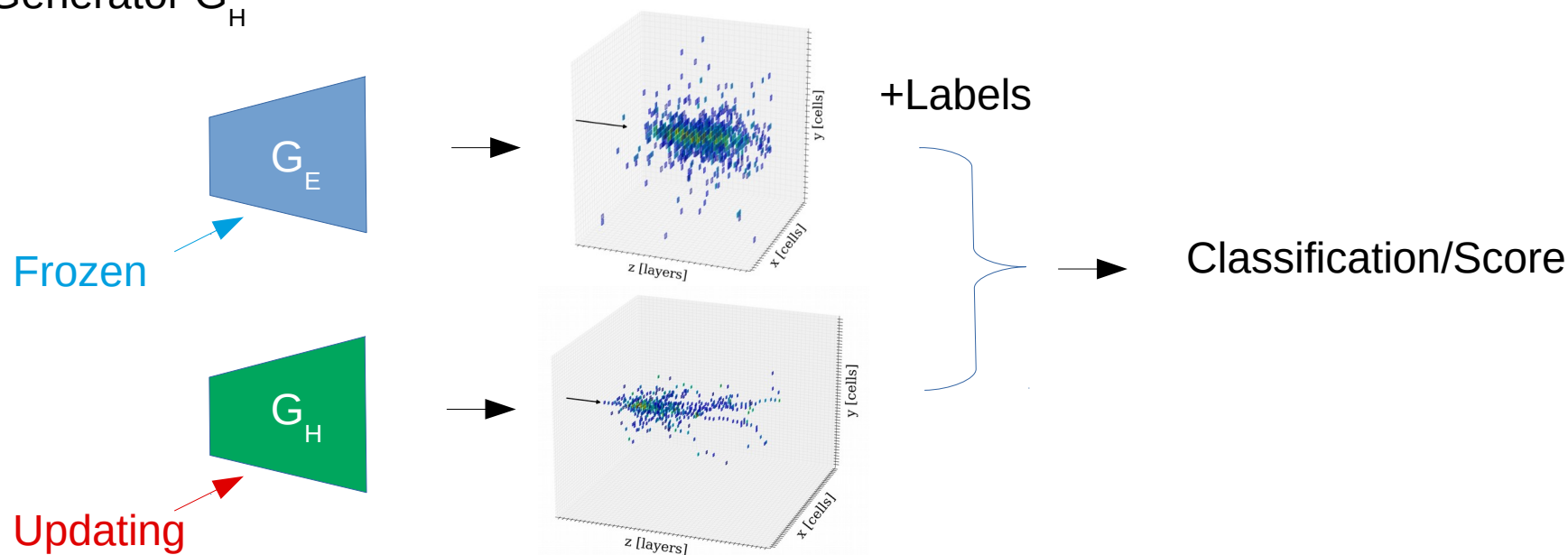
08.06.2022

Reminder: The Nested GAN idea



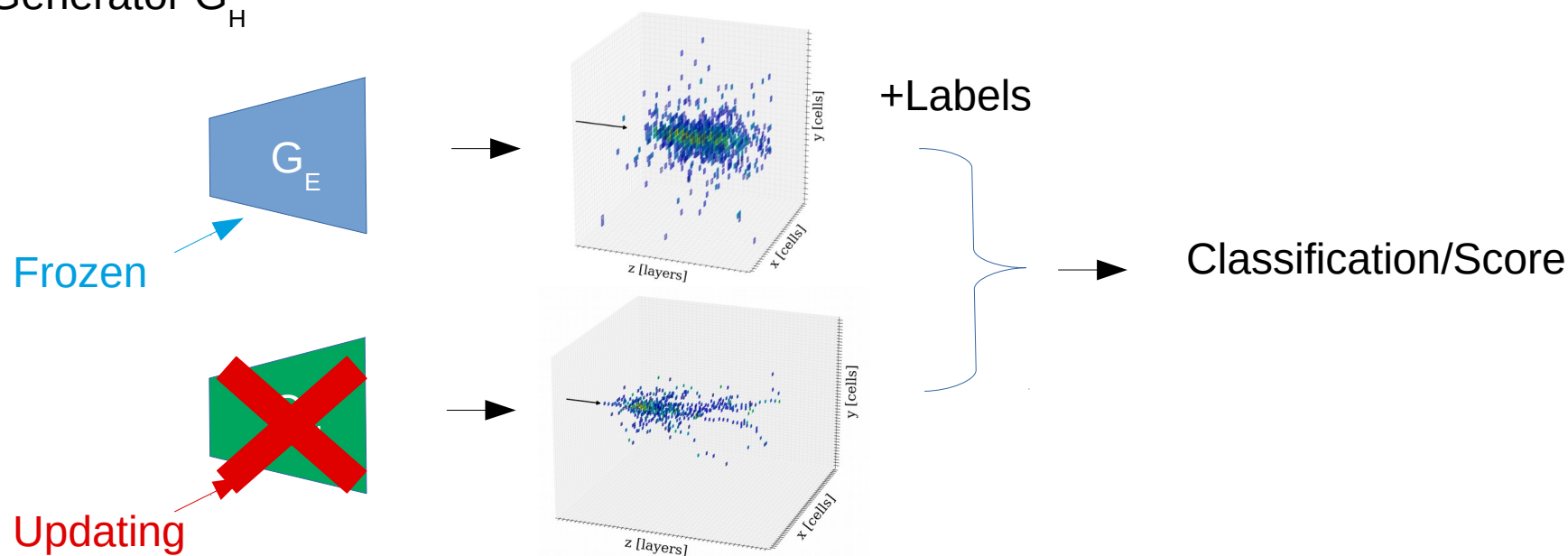
ECAL + HCAL- Potential issue from Engin's prototyping

- Engin has nicely trained the ECAL part, but HCAL part is more difficult
- Highlighted potential pitfall in the approach
- Consider the Global Discriminator, which takes both ECAL+HCAL input.
- The fake part of the training involves passing shower from our ECAL Generator G_E and HCAL showers from the HCAL Generator G_H



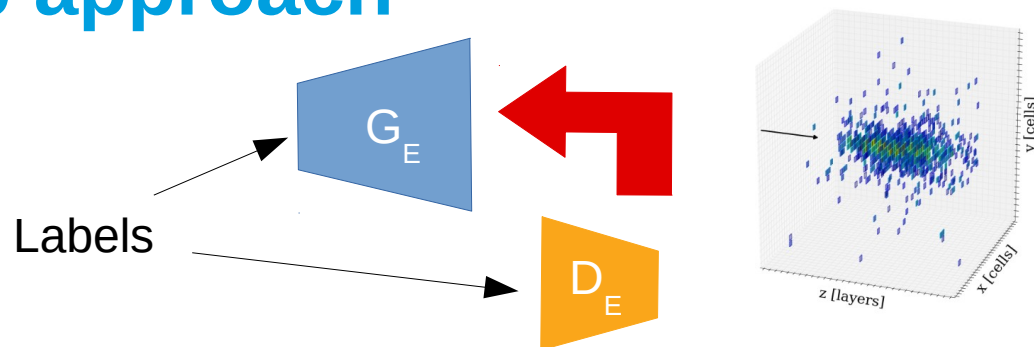
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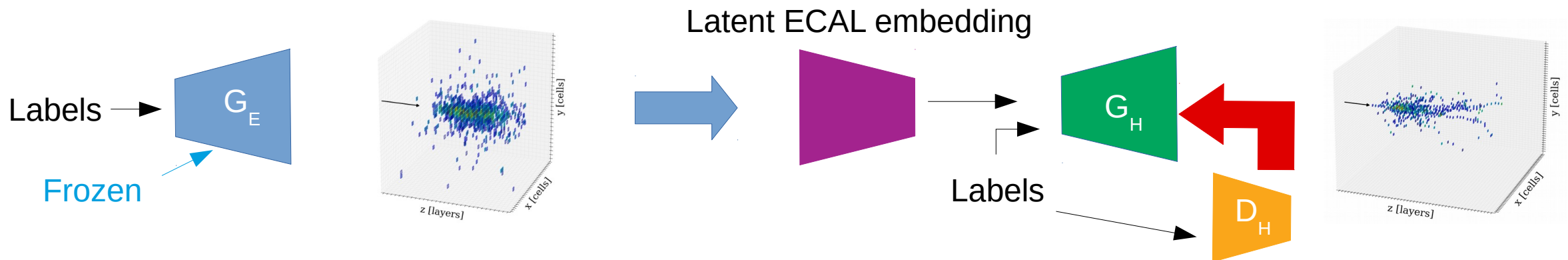


ECAL + HCAL- 3 step approach

1) Train ECAL generator

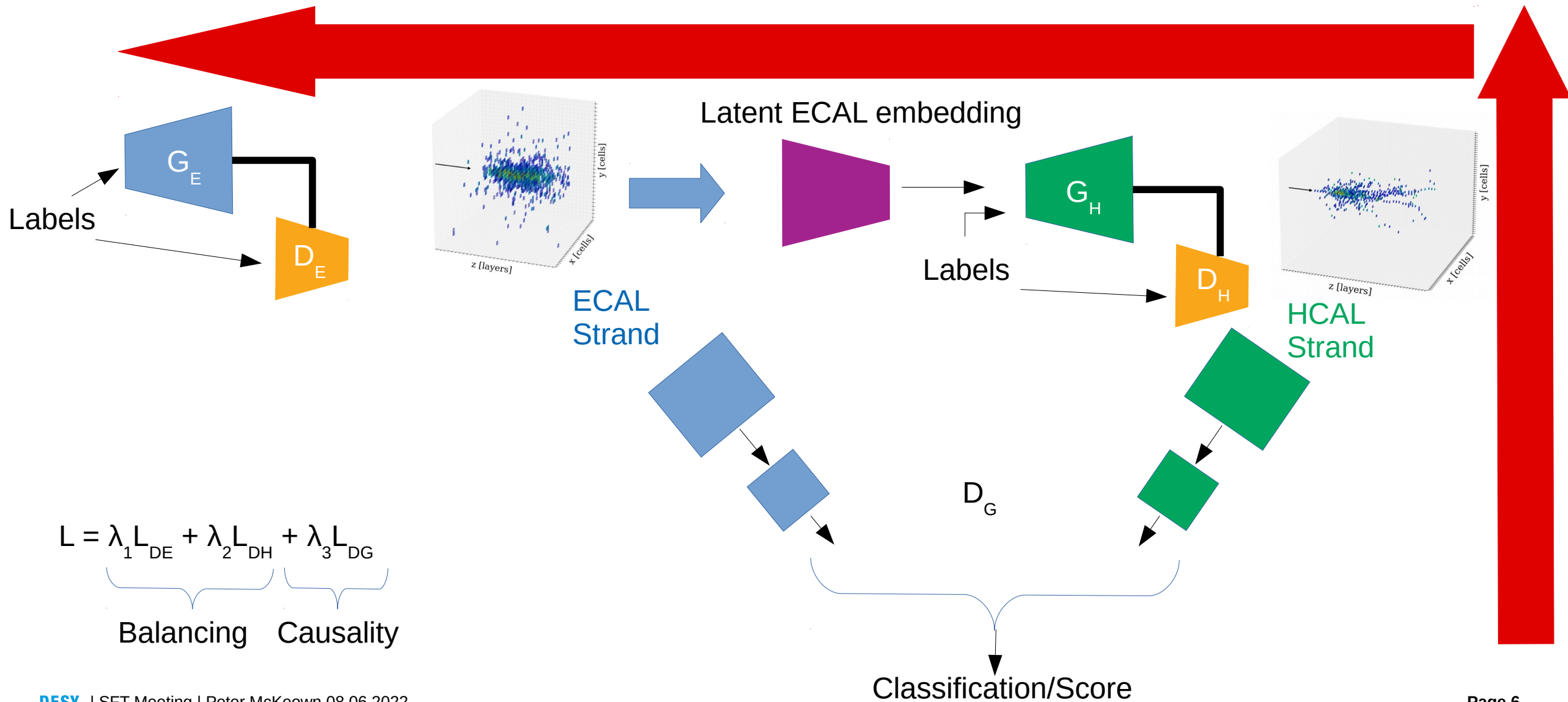


2) Train HCAL generator



ECAL + HCAL- 3 step approach

3) Train ECAL + HCAL



Other work

- TOF ML project preparation
 - Worked with Bohdan and Uli- now have samples/code to extract high/low level features
 - Looking into PyG and graphs more generally
- Angle and Energy paper
 - 1st iteration on description of models almost complete
- Geant4 Integration for Francisca's Classical/ML Fast Sim comparison:
 - Working with Thomas and Engin
 - Trying to merge Onnx ML approach from Anna with existing GFlash code
 - Lots of C++