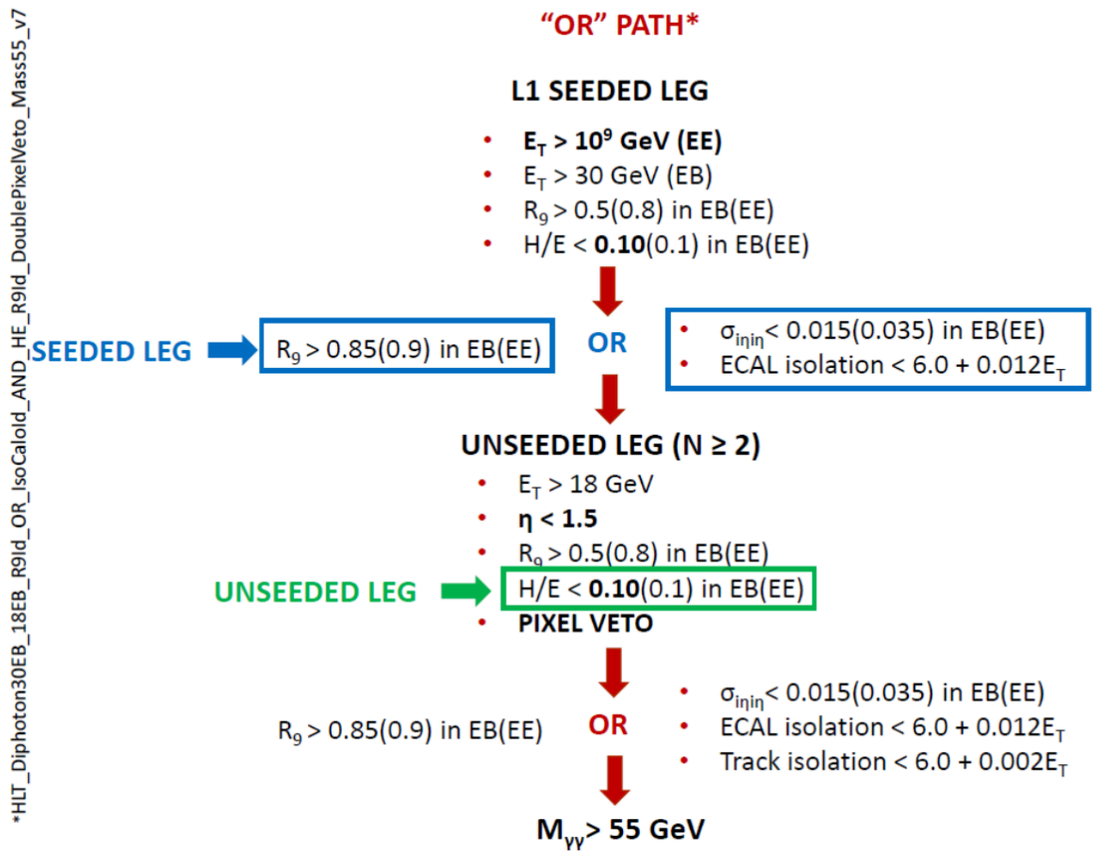
- Seeded leg : The L1 object that seeds the HLT (in our case a photon)

The Low-Mass HLT DiPhoton Trigger



- <u>Selections on L1 seed</u>
- ET> 10^9 (EE) (I think this high threshold is because the OR path is only supposed to be fired by photons in the EB
- ET > 30 (EB) + loose R9 cuts + H/E cuts
- On top of this, an OR of the tight R9 cuts + Isolation cuts are applied
- If at least one cluster passes this criterion then the entire ECAL is clustered (full HLT ECAL clustering)
- 2 clusters are now required to pass the "unseeded leg" requirements. (One of these two clusters is the seeded HLT cluster)

- ET > 18 requirement is applied, eta cut is applied such that only EB photons are selected
- Loose R9 and H/E requirements are applied (I don't know why EE requirements are also being applied here, since an eta cut has already been applied)
- Pixel Veto is applied on both legs
- Tight R9 OR sigmaetaeta + isolation cuts are applied
- Finally the diphoton object is required to have an invariant mass > 55