

# Background Subtraction

$$\frac{dN}{d\Delta\phi\_signal} = \left( \frac{1}{1 - Fbkg} \right) \left( \frac{dN}{d\Delta\phi\_inclusive} - Fbkg \left( \frac{dN}{d\Delta\phi\_random} \right) \right)$$

scaling factor to get yields per corrected i.e. non-random trigger

away-side yields inclusive (jet triggers + random triggers) → trigger from one event + associated tracks from same event

fraction of random trigger pairs to all trigger pairs  
 $= \int_{(0 - 0.3)} \text{black} / \int_{(0 - 0.3)} \text{red}$

away-side yields with untriggered background (jet triggers + random triggers) → trigger from one event + associated tracks from other events

