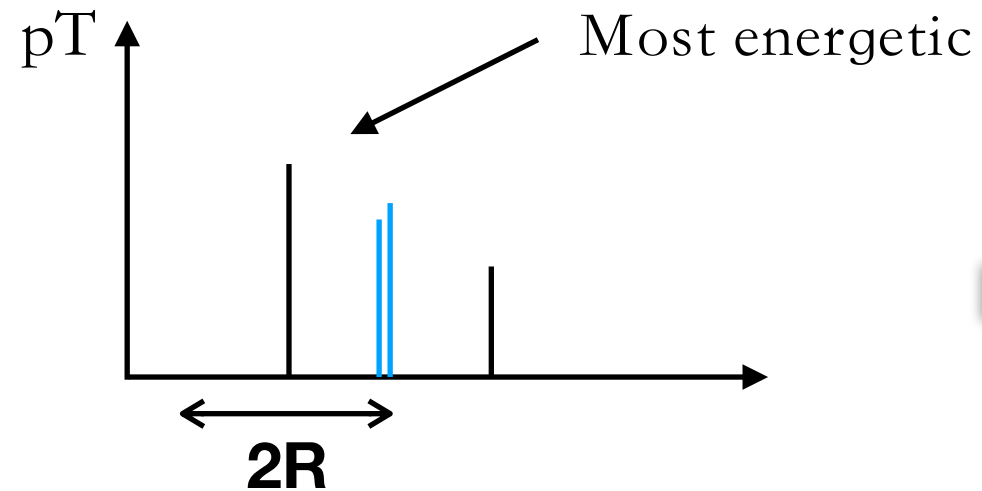
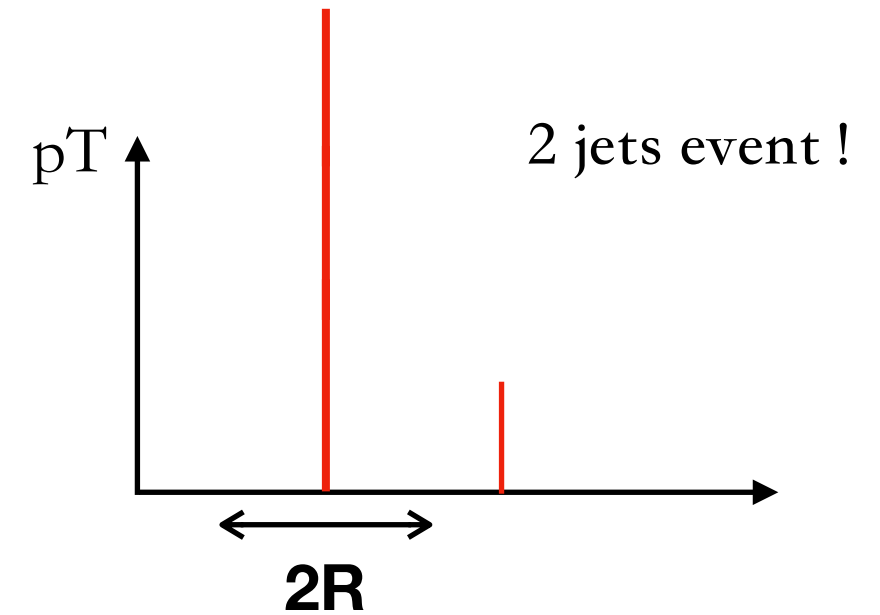
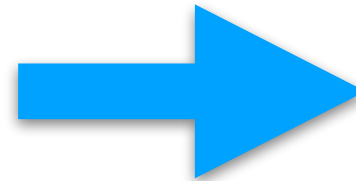


Cone algorithm around the most energetic particle:

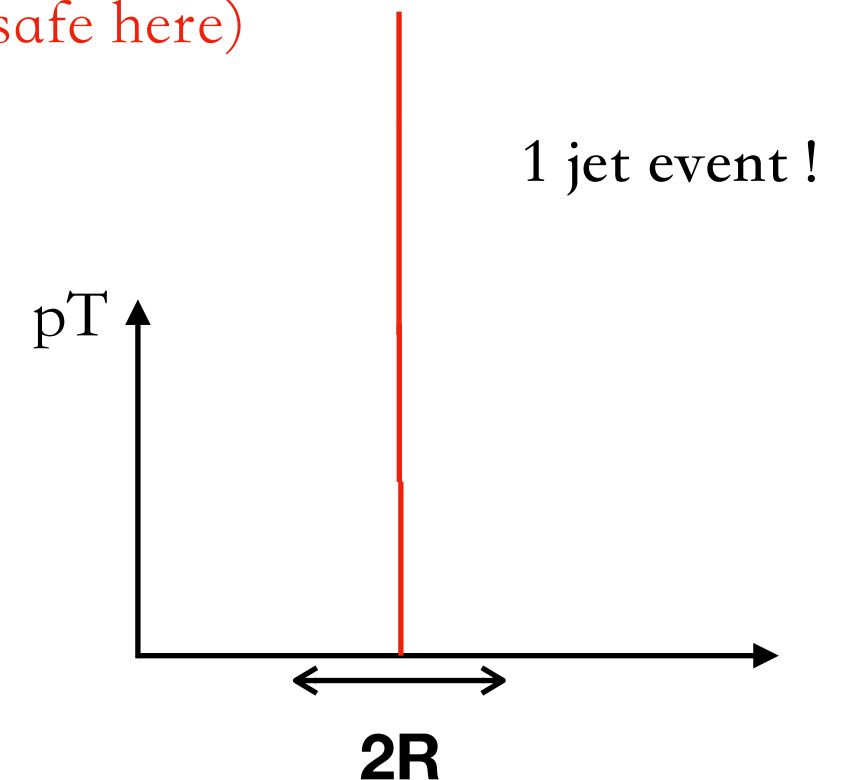
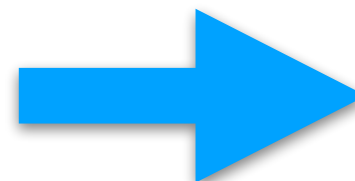
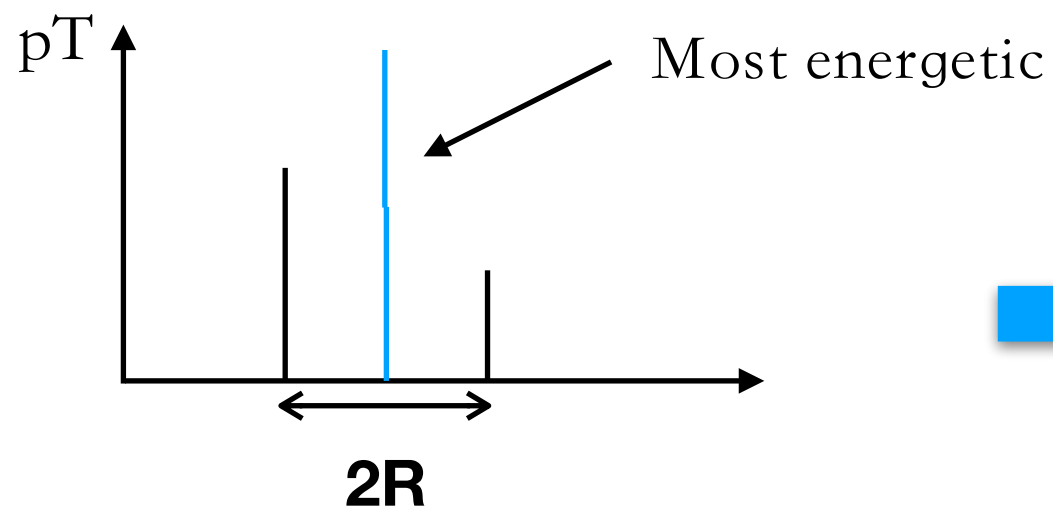
- Find the most energetic (psuedo)-particle, Draw a cone with radius R around it. All particles within R form into a psuedo-particle
- Iterate



Collinear
Splitting



Different results
IRC unsafe (c unsafe here)



Other examples:

- Multiplicity (IRC unsafe)

$$\sum_{i \in J} 1$$

- Jet charge

- $\kappa = 0$, infrared unsafe
(adding a soft charged particle changes the charge)
- $\kappa > 0$, collinear unsafe
(collinear splitting changes the charge)

$$\sum_{i \in J} \left(\frac{p_{T,i}}{p_{T,J}} \right)^{\kappa} Q_i$$

But all of these are experimentally well-defined operations or measurable physical observables