ATLAS Matching

Description: A particle is *reconstructed* if at

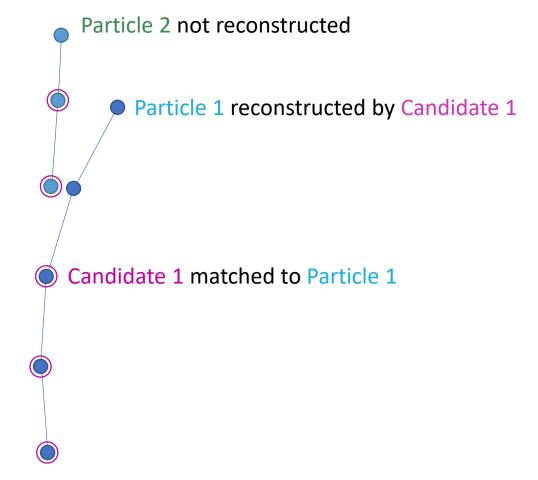
least one track is matched to it. A track is *matched* if over MF% of its hits belong to a single particle.

Performance: eff = 50%

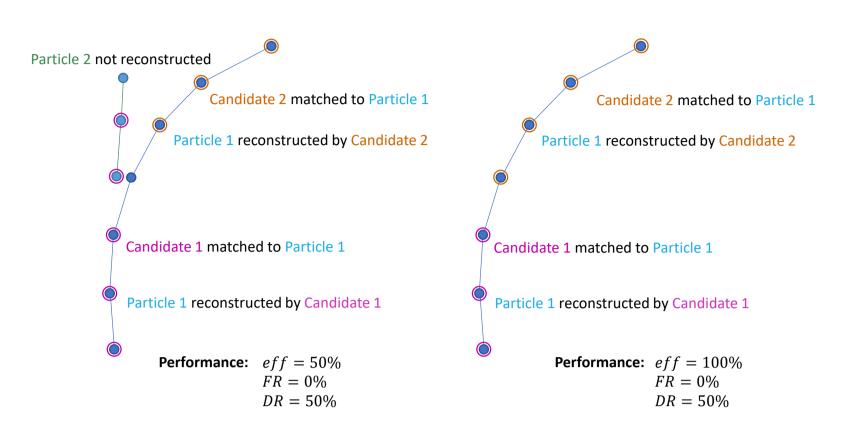
FR = 0%DR = 0%

MF%: The given matching fraction

FR: Fake rate = 1 - purity**DR:** Duplication rate



Other examples:



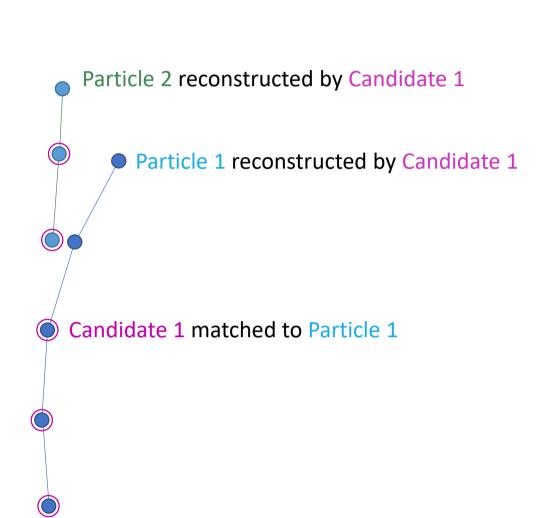
One-Way Matching

A particle is *reconstructed* if over MF% Description:

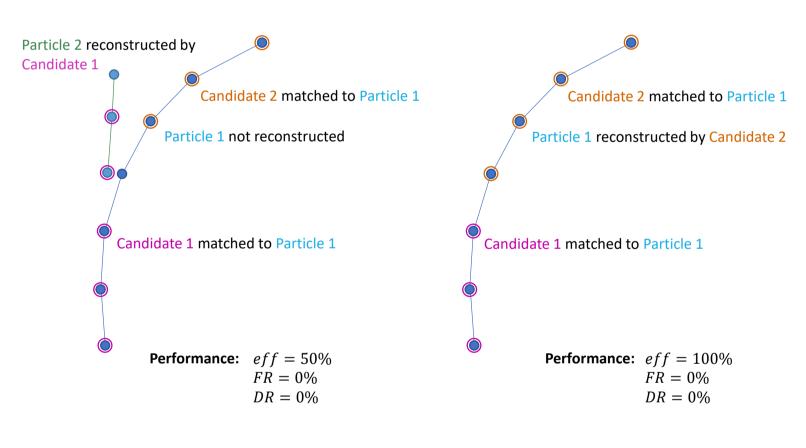
of its hits belong to a single track. A track is *matched* if over MF% of its hits belong to a single particle.

eff = 100%Performance:

FR = 0%DR = 0%



Other examples:



Two-Way Matching

Description: A particle is *reconstructed*, and a track is

matched, if over MF% of each of their

hits are shared by each other.

Therefore, a track is uniquely matched

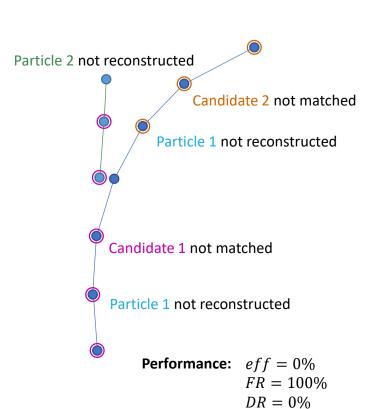
to the particle it reconstructs.

eff = 50%Performance:

FR = 0%

DR = 0%

Other examples:



Particle 2 not reconstructed Particle 1 reconstructed by Candidate 1 Candidate 1 matched to Particle 1

