

# CUTS ON LCIO OBJECTS

LCIO Collection	Requirement	Driver where Implemented
MatchedTracks	<5 shared hits	AmbiguityResolver in MergeTrackCollections
GBLTracks	$\text{Prob}(\chi^2_{\text{GBL}}; \text{dof}) > 10^{-5}$	GBLRefitterDriver
FinalStateParticles	e- , e+ : $\text{GoodnessOfPID}_{\text{MATCH}} < 10$ $ \Delta t_{\text{TRACK-CLUSTER}} - \text{offset}  < 6\text{ns}$ e- : $p(e-) < 0.75 E_{\text{beam}}$ $\gamma$ : Unmatched clusters	[Hps]ReconParticleDriver
OtherElectrons (new!)	GBLTrack charge -1 Not in FinalStateParticles	[Hps]ReconParticleDriver
V0Candidates,V0Vertices	Made from FinalStateParticles Opposite halves (top-bottom) $p(V0) < 1.2 E_{\text{beam}}$ $\text{Prob}(\chi^2_{\text{VTX}}) > 10^{-5}$ $ \Delta t_{\text{CLUSTER-CLUSTER}}  < 2\text{ns}$	[Hps]ReconParticleDriver
VcCandidates,VcVertices (new!)	Same as V0, but same half (top-top or bot-bot) Unconstrained only	[Hps]ReconParticleDriver , optional
MollerCandidates, MollerVertices	Made from FinalStateParticles/OtherElectrons Single neg-charged GBLTrack in each volume $0.8 E_{\text{beam}} < p(V_{\text{MOLLER}}) < 1.2 E_{\text{beam}}$	[Hps]ReconParticleDriver , optional

- BilloirVertex object now has layerCode member, persisted in Parameters map of LCIO Vertex object
  - For easy selections in Skims etc (2 = "L1L1", 3 = "L1L2", 4 = "L2L2")