



ElCrecon Jet Task Force Summary

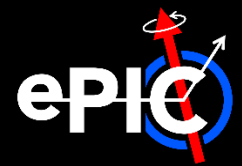
ePIC Jet/HF Working Group

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Zhongling Ji, Brian Page, Derek Anderson



Task Force Charge and Outcome



	edm4eic::TrackParameters	outputTrackParameters
reco	edm4eic::InclusiveKinematics	InclusiveKinematicsDA
reco	edm4eic::InclusiveKinematics	InclusiveKinematicsElectron
reco	edm4eic::InclusiveKinematics	InclusiveKinematicsJB
reco	edm4eic::InclusiveKinematics	InclusiveKinematicsSigma
reco	edm4eic::InclusiveKinematics	InclusiveKinematicsTruth
reco	edm4eic::InclusiveKinematics	InclusiveKinematicseSigma
RPOTS	edm4eic::ReconstructedParticle	ForwardRomanPotRecParticles
reco	edm4eic::ReconstructedParticle	GeneratedJets
reco	edm4eic::ReconstructedParticle	GeneratedParticles
	edm4eic::ReconstructedParticle	ReconstructedChargedParticles
reco	edm4eic::ReconstructedParticle	ReconstructedJets
	edm4eic::ReconstructedParticle	ReconstructedParticles
dig	edm4eic::ReconstructedParticle	SmearedFarForwardParticles
	edm4eic::ReconstructedParticle	outputParticles
	edm4eic::MCRecoParticleAssociation	ReconstructedChargedParticleAssociations
	edm4eic::MCRecoParticleAssociation	ReconstructedParticleAssociations
BEMC	edm4eic::MCRecoClusterParticleAssociation	EcalBarrelImagingClusterAssociations

- **Task Force Charge:** integrate a jet finder into EICrecon to facilitate simple jet studies and benchmarking

👉 **Task force was successful!**

- Tested and debugged implementation
 - › [PR #595](#)
 - › [PR #614](#)

- Two jet collections available in EICrecon output

- **Generated Jets:** reconstructed from charged particles
- **Reconstructed Jets:** reconstructed from tracks

Jet Details and To-Do



Parameter	Name	Value
Jet algorithm	m_jetAlgo	anti-kT
Jet recombination Scheme	m_recombScheme	E-scheme
Jet resolution parameter	m_rJet	1
Min. constituent pT	m_minCstPt	0.2 GeV/c
Max. constituent pT	m_maxCstPt	100 GeV/c
Min. jet pT	m_minJetPt	1 GeV/c
Area type	m_areaType	active
Max ghost rapidity	m_ghostMaxRap	3.5
No. of repeated ghost	m_numGhostRepeat	1
Area per ghost	m_ghostArea	0.001

- Documentation available [on the wiki](#)
 - ☞ Example code for working with collections available [here](#)
 - Take a look at the [code](#) on [GitHub](#)!
- **To-Do:**
 - Take advantage of PODIO-integration for constituents
 - Enable parameters to be changed
 - Explore jets in the calorimeters
 - (And more!)

Thank you!

