

uBooNE Reconstruction

	2021-3					2021-4					2021-5					2021-6					2021-7					2021-8			
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
uBooNE Offline	uBooNE Offline																												
uBooNE Reconstruction	uBooNE Reconstruction																												
March production reconstruction	Resolved 93%																												
Integrate Pandora into shower-finding (...)	Work in progress 80%																												
Port LArLite shower-finding code (...)	Assigned																												
Production shower finding	New 40%																												
Improve reconstruction speed by 2x	Accepted																												
Parent reconstruction milestones/tasks (...)	New 30%																												
MCC8 and "v6" reconstruction development	New 31%																												
Alternate Reconstruction Paths	New 33%																												
Integration of Cluster3D (...)	Work in progress 50%																												
Integration of wire-cell (...)	New																												
Integration of linecluster/trajcluster (...)	New 50%																												
Cosmic Ray tagging for use (...)	New																												
Cosmic Ray Tagger reconstruction	New																												
Reconstruction workflow	New																												
Final Object Selection	New																												
Common metrics for evaluation (...)	Assigned																												
Reconstruction Tuning	New																												
Reconstruction validation	New																												
Understand existing optical reconstruction (...)	New																												
Port LArLite based flash matching (...)	New																												
LArLite/LArSoft merge of shower (...)	New																												
Track vs. shower classification	New 60%																												
Shower merging and characterisation	New																												
Particle (esp. shower) merging	New 80%																												
Creation and refinement of vertex (...)	New 60%																												
Scoring of vertex candidates	New 90%																												

Missing tracks (fully-enclosed (...))	New 60%
Improved 3D SpacePoints	New 10%
Interface to new Track Fitter	New
Remove external shower-reconstruction (...)	Assigned
Overlapping track removal	Assigned
sample identification [through (...)]	Resolved
sample re-processing with gaussian (...)	Resolved
sample re-processing with updated (...)	New
shower 3D start point reconstruction	New
lifetime correction	Resolved
recombination correction	New 30%
dead-wire region impact on energy	New 20%
charge clustering impact on energy (...)	New
containment of charge in TPC : (...)	New
neutrino vertex resolution measurement (...)	New 50%
shower dE/dx reconstruction	New
detector energy calibration	New
data-driven 3D direction & energy (...)	New 80%
Pi0 Clustering	New
Optimize existing hit finder parameters	New
MC gain estimation and validation	New
DATA gain validation	New
Optical Reconstruction	New
Shower Reconstruction	New 39%
Shower Reconstruction - Pandora (...)	New 47%
Vertex Reconstruction	New 75%
Vertex Reconstruction - Pandora (...)	New 75%
Track Reconstruction	New 23%
Track Reconstruction - Pandora (...)	New 35%
Shower Reconstruction - OpenCV (...)	New
Pi0 data sample reconstruction	Assigned 39%
Energy reconstruction	New 36%
3D shower direction reconstruction	New 50%
Pi0 Mass Peak reconstruction	New 40%

Hit Finding electronics gain calculation	New New
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