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Reconstructing 3D hit information directly from 2D projections

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Many Liquid Argon TPC neutrino detectors record the details of the neutrino interaction in the form of hits projected onto two or three 2D wire views. The goal of reconstruction is ultimately to construct 3D objects compatible with the 2D projections. This talk will present two systems that are able to recover 3D hit information directly from the 2D hits, to serve as a starting point for fully-3D reconstruction. Formally this is an underconstrained inverse problem, akin to deconvolution, and the key to success is the application of an appropriate regularization.

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