1037-65-76 Hans Rullgaard* (hansr@math.su.se), Department of Mathematics, Stockholm University, 10691 Stockholm, Sweden. L^1 regularization applied to electron tomography. Preliminary report. Electron tomography (ET) is a tomographic problem where the data typically has a very high noise level. We present some new findings on the application of L^1 regularization to ET, and describe methods for designing a regularization functional and choosing the regularization parameters. (Received January 23, 2008)