1109-60-313 **Tyler Gomez** and **Jason Swanson***, University of Central Florida, Department of Mathematics, 4000 Central Florida Blvd, Orlando, FL 32816, and **Alexandru Tamasan**. *A filtering problem in stochastic tomography.* Preliminary report.

In tomography, one strives to recover an unknown function f on a domain D from its Radon transform, Rf. The Radon transform is a function on the space of lines through D, and $Rf(L)$ is the line integral of f along L. In medical imaging, f represents the density of a body, and Rf is measured by passing X-rays through the body. We consider a stochastic version of this problem, in which we observe a stochastic perturbation of Rf. We then wish to compute the conditional distribution of f, given this observation. This is work in progress with Tyler Gomez and Alexandru Tamasan of the University of Central Florida. (Received February 03, 2015)