1125-14-2238 **Serkan Hosten*** (serkan@sfsu.edu), 1600 Holloway Avenue, San Francisco, CA 94132, and **Carlos Amendola**, **Nathan Bliss**, **Isaac Burke**, **Courtney Gibbons**, **Martin Helmer**, **Evan Nash**, **Jose Rodriguez** and **Daniel Smolkin**. *Maximum Likelihood Degree of Toric Varieties and Discriminants.*

We consider the maximum likelihood estimation problem on a toric variety. The family of all varieties obtained by a torus action on a toric variety can be stratified with respect to the maximum lilkelihood degree of the members of the family. For a generic member the maximum likelihood degree is equal to the degree of the variety. We determine that those members with a deficient maximum likelihood degree correspond to the points of the principal A-determinant. We will present examples of toric varieties for which we can compute the stratification with respect to the maximum likelihood degree. (Received September 20, 2016)