

1086-VG-1576 **Qiwei Sheng*** (qiwei-sheng@uiowa.edu). *A numerical method for generalized Fokker-Planck equations.*

Generalized Fokker-Planck (GFP) equations have been employed to approximate the radiative transfer equation in applications of highly forward peaked biological media. In this talk, we discuss a numerical method for solving GFP equations. The numerical method is based on a variational formulation involving even and odd components of the solution. We show the well-posedness of the variational formulation and develop a Galerkin method where spherical harmonics are used for the angular approximation and finite elements are used for spatial discretization. Finally, an iteration procedure is introduced to solve the problem and its convergence is shown. (Received September 24, 2012)