1096-30-436 **Timothy J Ferguson*** (timothy.j.ferguson@vanderbilt.edu), Department of Mathematics, 1326 Stevenson Center, Vanderbilt University, Nashville, TN 37240. *Regularity of Extremal Functions in Weighted Bergman and Fock Type Spaces.*

We discuss the regularity of extremal functions in certain weighted Bergman and Fock type spaces. Given an appropriate analytic function k, the corresponding extremal function is the function with unit norm maximizing $\operatorname{Re} \int_\Omega f(z)\overline{k(z)}\,\nu(z)\,dA(z)$ over all functions f of unit norm, where ν is the weight function and Ω is the domain of the functions in the space. We consider the case where $\nu(z)$ is a decreasing radial function satisfying some additional assumptions, and where Ω is either a disc centered at the origin or the entire complex plane. We show that if k grows slowly in a certain sense, then f must grow slowly in a related sense. (Received September 03, 2013)