

1067-Z1-2248      **Xuhua Liu\*** (xz10002@auburn.edu), Mathematics and Statistics, 221 Parker Hall, Auburn University, Auburn, AL 36849-5310. *Multiplicities and generalized numerical range.*

We discuss the multiplicities of the relative interior points of the classical numerical range of an  $n \times n$  complex matrix

$$W(A) = \{x^*Ax : x \in \mathbb{C}^n, x^*x = 1\}$$

and its generalization. Real analog is studied. (Received September 22, 2010)