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Tyler J. Moran* (tjmoran@email.wm.edu) and **Ilya M. Spitkovsky** (ilya@math.wm.edu). *On almost normal matrices.*

Let an n -by- n matrix A be almost normal in a sense that it has $n - 1$ orthogonal eigenvectors. The properties of its numerical range $W(A)$ and Aluthge transform Δ are explored. In particular, it is proven that for unitarily irreducible almost normal A , $W(A)$ cannot have flat portions on the boundary and $\Delta(A)$ is not normal (the latter, under the additional conditions that $n > 2$ and A is invertible). In passing, the unitary irreducibility criterion for A , almost normality criterion for A^* , and the rank formula for the self-commutator $A^*A - AA^*$ are established. (Received September 23, 2012)