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**Tai Ha\*** (tha@tulane.edu) and **Thai T Nguyen**. *Newton-Okounkov body and analytic spread of graded families of monomial ideals.*

We discuss properties of the Newton-Okounkov body associated to a graded family of monomial ideals and their algebraic consequences. Particularly, we give a formula for the analytic spread of the family in terms of the dimension of compact faces of its Newton-Okounkov body. (Received August 27, 2021)