1146-13-342 **Michael DiPasquale**, **Chris Francisco**, **Jeff Mermin*** (`mermin@math.okstate.edu`) and **Jay Schweig**. *Asymptotic resurgence via integral closure.*

The symbolic powers of an ideal I, denoted $I^{(s)}$, are a geometric analog of its regular powers. In general, the symbolic power $I^{(s)}$ is larger than the regular power I^s. An important question in the study of symbolic powers is the opposite containment, that is, for which r and s do we have $I^{(s)} \subset I^r$? The statistics *resurgence* and *asymptotic resurgence* study the ratios $\frac{r}{s}$ which guarantee this containment.

In the case that I is a squarefree monomial ideal, we show how to determine the asymptotic resurgence from the Newton polyhedron and a related object called the symbolic polyhedron. In full generality, we use integral closures to establish that the asymptotic resurgence is equal to a maximum of Waldschmidt-like constants. (Received January 26, 2019)

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