Functions on Newton–Okounkov bodies
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Newton–Okounkov bodies are a convex–geometric tool to study the asymptotic behaviour of global sections of line bundles, as such, applications of the idea have sprung up in many areas around algebraic geometry including representation theory as well. Here I will go one step further and study concave functions on Newton–Okounkov bodies that arise from multiplicative filtrations on the section ring of the underlying line bundle.

Beside studying the formal behaviour of such functions I will quickly discuss some applications, including a very interesting recent result of McKinnon–Roth regarding Diophantine approximation.