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Sebastien Boucksom and **Tommaso de Fernex*** (defernex@math.utah.edu), 155 S 1400 E, Salt Lake City, UT 84103, and **Charles Favre**. *The valuation space of an isolated normal singularity.*

We study positivity properties of divisors on the Zariski space of a normal variety X , which encodes all resolutions of X . In the case X has an isolated singularity, we concurrently work on the full space of valuations of rank one centered at the singular point and study properties of various functions on it. We define a notion “volume” of an isolated singularity which relates to the singularities in the minimal model program, extending previous work of Wahl on surfaces. Our work has also applications to global geometry, and address questions of the following type: - Which projective varieties admit polarized finite endomorphisms of degree > 1 ? - Is the property of being log-Fano preserved by surjective morphisms of projective varieties? (Received September 12, 2010)