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The birational geometry of tropicalization

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In 2005 J. Tevelev proved that the tropicalization of a closed subvariety Y of a *n*-dimensional torus induces a 'good' compactification of Y in a toric variety. We will show how this compactification reconstructs the notion of tropical line bundle introduced by C. Torchiani on tropical cycles, starting from the original variety and giving a birational nature to the whole structure.

We will also give a connection to the theory of Newton-Okounkov bodies.

Part of the work is with C. Novelli.