

**Meeting:** 1003, Atlanta, Georgia, SS 35A, AMS-MAA Special Session on Tropical Geometry, I

1003-14-1553      **Jenia Tevelev\*** (tevelev@math.utexas.edu). *Tropical Compactifications.*

We study compactifications of very affine varieties, mostly various moduli spaces, defined using their nonarchimedean amoebas. Typical examples are  $\overline{M}_{0,n}$  and compactifications of other hyperplane arrangement complements, Cayley–Naruki–Looijenga moduli spaces of Del Pezzo surfaces, Kapranov’s quotients of Grassmannians, and some totally new compactifications. This new theory clarifies connections between geometry and topology of moduli spaces, non-archimedean analysis, tropical geometry (and related combinatorial theories of clusters, matroids, etc.), and logarithmic geometry. The case of Grassmannians is particularly interesting not only by historical reasons but because it is related to the quest for the canonical resolution of singularities. (Received October 05, 2004)