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Suzanne Elise Crifo* (secrifo@ncsu.edu). *Some Maximal Dominant Weights and their Multiplicities for Affine Lie Algebra Representations*. Preliminary report.

Affine Lie algebras are infinite dimensional analogs of finite dimensional simple Lie algebras. It is known there are finitely many maximal dominant weights for any integrable highest weight representation of an affine Lie algebra. However, determining these maximal dominant weights is a nontrivial task. So far only the descriptions of these weights are known for affine Lie algebra $A_n^{(1)}$. In this talk we will discuss the maximal dominant weights of the integrable highest weight representation of any affine Lie algebra with highest weight $k\Lambda_0$ and give some examples of their multiplicities. (Received September 25, 2018)