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Maria Gorelik* (maria.gorelik@weizmann.ac.il), Math. Dept., Weizmann Institute of Science, Rehovot, Israel. *Vacuum modules over affine Lie superalgebras*. Preliminary report.

This is a joint work with V. Kac. A criterion of irreducibility of vacuum modules over affine Lie superalgebras is given. As an application, a criterion of simplicity for the W-algebra $W^k(\mathfrak{g}, f)$ when \mathfrak{g} is a simple Lie algebra and f is a minimal nilpotent element, is given. (Received March 06, 2006)