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**Peter Tingley\***, 1032 W. Sheridan Rd., Chicago, IL 60660. *Quiver varieties and root multiplicities for symmetric Kac-Moody algebras.*

We present combinatorial upper bounds on dimensions of certain imaginary root spaces for symmetric Kac-Moody algebras. These come from the realization of the infinity crystal using quiver varieties. We formulate the framework quite generally, but only work out specifics for one special case. We conjecture that our bound is quite tight, and give both computational evidence and heuristic justification for this conjecture. (Received August 24, 2018)