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Iana I Anguelova* (anguelov@math.uiuc.edu), Department of Mathematics, 273 Altgeld Hall, MC-382, 1409 West Green Street, Urbana, IL 61801. *H_h -(quantum) vertex algebras*. Preliminary report.

Let $H_h = \mathbb{C}[D, T_h]$ be the Hopf algebra with commuting generators D (primitive) and T_h (grouplike, acting as translation). We construct (quantum) vertex algebras with H_h as symmetry and discuss rational vs trigonometric vertex algebras. We discuss applications of different (quantum) lattice H_h -vertex algebras to symmetric polynomials. (Received August 16, 2005)