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**The Elliptic Algebra  $U_{q,p}(B_N^{(1)})$  and Vertex Operators**

Abstract: We introduce an elliptic quantum algebra of type  $B_N^{(1)}$ . By using the elliptic analogue of the Drinfeld currents, we construct the L-operator, which satisfies the dynamical RLL relations characterizing the elliptic quantum algebra  $U_{q,p}(B_N^{(1)})$ . We then derive the two types of vertex operators of arbitrary level  $U_{q,p}(B_N^{(1)})$ -modules. As an example, we give a level one free field representation. This is a joint work with Hitoshi Konno.