1016-81-256 **Iana I Anguelova*** (anguelov@math.uiuc.edu), Department of Mathematics, 273 Altgeld Hall, MC-382, 1409 West Green Street, Urbana, IL 61801. *Quantum vertex algebras and symmetric polynomials.* Preliminary report.

The boson-fermion correspondence is an isomorphism of classical vertex superalgebras and plays a very important part in the theory of KP and KdV hierarchies. Schur functions are special orthonormal basis of the bosonic picture. We discuss different quantum vertex algebras structures needed to incorporate the quantum vertex operators (as considered for instance by N. Jing) describing some classes of symmetric polynomials, such as Hall-Littlewood and Macdonald polynomials. These quantum vertex algebras should form the bosonic counterpart of a quantum boson-fermion correspondence. (Received February 13, 2006)