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**Linhong Wang.** *Ideal theory of  $q$ -commutative power series rings.* Preliminary report.

Motivated by number-theoretic issues, Schneider and Venjakob have recently initiated a systematic, abstract study of noetherian skew power series rings. As another step toward a general theory of noetherian skew power series rings (although from a different point of view and admittedly not directly applicable to the number-theoretic setting), we consider the example of power series in variables  $X_1, \dots, X_n$  satisfying  $X_i X_j = q_{ij} X_j X_i$ , where the  $q_{ij}$  are scalars in some ground field. Our main results provide a detailed description of the prime ideals, showing that the prime spectra are finitely stratified by commutative (non-affine) spectra and that the prime ideals are normally separated. Our results mimic in part the case of skew polynomial rings in the  $X_i$  satisfying the above relations, but the approach is necessarily somewhat different. (Received January 05, 2007)