The Letzter map for quantum symmetric pairs

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A crucial ingredient in the theory of quantum symmetric pairs is the quasi K-matrix which is an analogue of the quasi R-matrix in the theory of quantum groups. The quasi K-matrix plays an important role in the construction of canonical bases, universal K-matrices and braid group actions for quantum symmetric pairs. The quasi K-matrix was initially constructed by an intricate induction argument.

In this talk, I will explain how the quasi K-matrix can be directly obtained from the quasi R-matrix via a projection map first considered by G. Letzter. The intertwiner property of the quasi K-matrix can then be established via a notion of short star-product. The talk is based on joint work with M. Yakimov.