



# The SOS model partition function and the elliptic weight functions

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Résumé en anglais We generalized a recent observation (Khoroshkin and Pakuliak 2005 *Theor. Math. Phys.* 145 1373) that the partition function of the six-vertex model with domain wall boundary conditions can be obtained from a calculation of projections of the product of total currents in the quantum affine algebra in its current realization. A generalization is done for the elliptic current algebra (Enriquez and Felder 1998 *Commun. Math. Phys.* 195 651, Enriquez and Rubtsov 1997 *Ann. Sci. Ecole Norm. Sup.* 30 821). The projections of the product of total currents in this case are calculated explicitly and are presented as integral transforms of a product of the total currents. It is proved that the integral kernel of this transform is proportional to the partition function of the SOS model with domain wall boundary conditions.

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