Plane partitions with 2-periodic weights

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We will discuss scaling limits of skew plane partitions with 2-periodic weights under several boundary conditions. We will discuss the frozen boundary and the correlation kernel of the limiting point processes. Of particular interest is the process at the turning points. The turning points that appear in the homogeneous case split in the 2-periodic case into pairs of turning points macroscopically separated by a "semi-frozen" region. As a result the point process at a turning point is not the GUE minor process, but rather a pair of GUE minor processes, non-trivially correlated. We will also discuss an intermediate regime when the weights are periodic but all converge to 1. In this regime the limit shape and correlations in the bulk are the same as in the case of homogeneous weights and periodicity is not visible in the bulk. However, the process at turning points is still not the GUE minor process.