

**Meeting:** 1003, Atlanta, Georgia, SS 30A, AMS Special Session on Analysis Problems in Modern Physics, I

1003-82-887      **Konstantin Palamarchuk\*** ([kostya@math.berkeley.edu](mailto:kostya@math.berkeley.edu)), Department of Mathematics, University of California at Berkeley, Evans Hall, #3840, Berkeley, CA 94720-3840, and **Nicolai Reshetikhin** ([reshetik@math.berkeley.edu](mailto:reshetik@math.berkeley.edu)), Department of Mathematics, University of California at Berkeley, Evans Hall #3840, Berkeley, CA 94720-3840. *Coexistence of phases in the 6-vertex model*. Preliminary report.

The limit shape phenomenon, also known as coexistence of phase or arctic circle, takes place in the 6-vertex model with domain wall boundary condition. We will review known results about it and will present recent progress in this direction. (Received September 30, 2004)