1052-35-286 **V. Zharnitsky*** (vz@math.uiuc.edu). *Near-linear dynamics in KdV with periodic boundary conditions.*

It will be shown that in KdV equation with periodic boundary conditions, high frequency solutions evolve almost as the linear ones. On the real line such behavior could be attributed to the dispersive decay. While on the circle such dispersive decay is not possible, the dipersion manifests itself in averaging out nonlinearity over the high frequency solutions. This result is obtained by the normal form procedure. This is a joint work with M.B. Erdogan and N. Tzirakis. (Received August 31, 2009)