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Jeff Baker, Michael Loss and **Gunter Stolz*** (stolz@math.uab.edu), Department of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294-1170. *Bubbles tend to the boundary.*

Consider a Schrodinger operator on a bounded domain with an obstacle given by a compactly supported potential and impose Neumann boundary conditions. What is the optimal placement of the obstacle to minimize the ground state energy? We present joint work with J. Baker and M. Loss which shows for different classes of domains that the obstacle tends to the boundary. This is independent of the sign of the obstacle (i.e. attractive or repulsive potential), which is in contrast to the situation for the corresponding Dirichlet problem. (Received August 21, 2008)