Confinement of a particle for the fractional (relativistic) Schrdinger equation with a very singular potential

J. I. Daz

We present some generalization of previous results by the author concerning on non-relativistic Schrdinger equation with a very singular potential. In the relativistic case, we shall show that the solution, on a bounded domain (and a potential singular on its boundary) is flat near the boundary, so that the extensin by zero outside the domain is a solution (in a suitable sense) of the global problem on the whole space. The equation involves one of the most popular fractional diffusion operators.