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**Yavdat Ilyasov\*** (ilyasov02@gmail.com), 112, Chernyshevsky str., Ufa, 450008, Russia. *Stable and unstable compact support solutions of non-Lipschitz evolution problems*. Preliminary report.

We consider compact support ground states of the Dirichlet problem for semilinear autonomous elliptic equations with a strong absorption term given by a non-Lipschitz function. We show that these type of solutions for the associated parabolic problems are unstable for dimensions  $N = 1, 2$ . Then we demonstrate that they can be stable for  $N \geq 3$ , with certain suitable exponent values of the involved nonlinearities. Furthermore, we discuss a nonuniqueness of (non-)compact support stable solutions of elliptic equations with non-Lipschitz nonlinearities, where the exponent values of these nonlinearities are chosen according to the dimension  $N$ . The approach is based on variational methods where Pohozaev's identity together with certain fibering type arguments play a crucial role.

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