Scaling in activated escape of underdamped systems IRA
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SHAPIRO, Michigan State University — Noise-induced escape from potentials is
ubiquitous in many areas of physics. Here, noise-induced escape from a metastable
state of a dynamical system is studied close to a saddle-node bifurcation point, but
in a region where the system remains underdamped. We find the activation energy
of escape scales as a power of the distance to the bifurcation point. Moreover, we
find two types of scaling and the corresponding critical exponents.

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