

ASYMPTOTIC BEHAVIOR OF PARABOLIC EQUATIONS WITH ADMISSIBLE BLOW-UP

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Our aim is to describe the long-time behavior of solutions of parabolic equations in the case when some of them may blow up in a finite or infinite time. This is done by providing a maximal compact invariant set attracting each initial data for which the corresponding solution does not blow up. The abstract result is applied to the Frank-Kamenetskii equation

$$\begin{aligned}u_t &= \Delta u + \lambda e^u, & \text{in } B(0, 1) \\ &+ \text{Dirichlet b.c.}, & \text{in } \partial B(0, 1)\end{aligned}$$

and to the N -dimensional Navier-Stokes system where small external force is considered.

REFERENCES

- [1] R. Czaja, “Asymptotics of Parabolic Equations with Possible Blow-up”, *Colloquium Mathematicum*, **99**, 61–73 (2004).

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