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Time-dependent attractors of wave equations with linear memory on $\mathbb{R}^n$. (Chinese. English summary) Zbl 07366744
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Summary: In this paper, based on the concept of time-dependent global attractors, we study the long-time behavior of wave equations with linear memory on unbounded domain. We prove that the process is asymptotically compact by using the tail estimate and contractive functions method, and then we obtain the existence of the time-dependent global attractors in $H^1(\mathbb{R}^n) \times L^2(\mathbb{R}^n) \times L^2_\mu(\mathbb{R}^+; H^1(\mathbb{R}^n))$.

MSC:
35B41 Attractors
35L05 Wave equation

Keywords:
wave equation; linear memory; contractive function; unbounded domain; time-dependent attractor