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While the nature of cosmological “Big Bang”-type singularities has been extensively studied in model spacetime solutions of Einstein’s equations , much less is known about what happens in the expanding direction of such solutions. Using a combination of numerical and analytical tools, we examine the dynamical behavior of the gravitational field in the expanding direction of vacuum solutions with a spatially-acting 2-torus isometry. We find striking dynamical attractor behavior, along with strong indications of asymptotic equipartition of energy between the two gravitational field polarizations. We also find that the behavior in the expanding direction of subclasses of these model spacetimes, such as those which are polarized and the Gowdy spacetimes, is generally unstable. (Received September 16, 2017)