Rates of convergence for inexact Krasnosel?skii?Mann iterations in Banach spaces

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 We study the convergence of an inexact version of the classical Krasnosel?skii?Mann iteration for computing fixed points of nonexpansive maps. Our main result establishes a new metric bound for the fixed-point residuals, from which we derive their rate of convergence as well as the convergence of the iterates towards a fixed point. The results are applied to three variants of the basic iteration: infeasible iterations with approximate projections, the Ishikawa iteration, and diagonal Krasnosels?kii?Mann schemes. The results are also extended to continuous time in order to study the asymptotics of nonautonomous evolution equations governed by nonexpansive operators.