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**Mihai Bailesteanu\*** (mihai@ccsu.edu), Central Connecticut State University, 1615 Stanley Street, 120 Marcus White Hall, New Britain, CT 06050. *A Harnack inequality for the parabolic Allen-Cahn equation.* Preliminary report.

We prove a Harnack inequality for the solution of the parabolic Allen-Cahn equation  $\frac{\partial f}{\partial t} = \Delta f - (f^3 - f)$  on a closed  $n$ -dimensional manifold. As a corollary we find a gradient bound for the standing wave solution, which improves on a result of Modica from the 1980s. (Received September 14, 2015)