1011-93-324 **Alexander Y Khapalov*** (khapala@wsu.edu), Department of Mathematics, Washington State University, Pullman, WA 99164, and **Luis Alberto Fernandez** (lafernandez@unican.es), Dpto. Matematicas, Estadistica y Computacion, Facultad de Ciencias, Avda de los Castros, Universidad de Cantabria, 39005 Santander, Spain. *Some controllability results for parabolic equations by means of multiplicative and nonnegative additive controls of local support.*

We discuss several new results on non-negative approximate controllability for the parabolic equations by means of two types of controls, which we link together. One is the multiplicative (or bilinear) controls regulating the reaction rate of the process at hand. The second is the non-negative additive locally distributed controls. We assume that at every moment of time these controls are acting within a proper subdomain of fixed size of the system's space domain. Our results include approximate controllability properties both for the static and mobile control supports. (Received August 30, 2005)