

Ann. Funct. Anal. 1 (2010), no. 1, 59–71

 $\mathscr{A}$ NNALS OF  $\mathscr{F}$ UNCTIONAL  $\mathscr{A}$ NALYSIS

ISSN: 2008-8752 (electronic)

URL: www.emis.de/journals/AFA/

## SPECTRAL MAPPING THEOREMS AND STABILITY THEORY IN LINEAR DYNAMICAL SYSTEMS

R. K. SINGH

Communicated by K. Ciesielski

ABSTRACT. The spectral properties of the operators inducing linear dynamical systems on Banach spaces determine the asymptotic properties of the systems. In this note an interaction between the spectral mapping properties of operators and stability properties of the corresponding dynamical systems is presented.

DEPARTMENT OF MATHEMATICS AND ASTRONOMY, UNIVERSITY OF LUCKNOW, LUCKNOW, U.P., INDIA.

E-mail address: rajkishor@hotmail.com

Date: Received: 2 July 2010; Accepted: 17 October 2010.

<sup>2010</sup> Mathematics Subject Classification. Primary 47A11; Secondary 47B37, 46E40, 37C75. Key words and phrases. Functional homomorphisms, dynamical systems, spectral mapping