

MAPS PRESERVING GENERAL MEANS OF POSITIVE OPERATORS*

LAJOS MOLNÁR[†]

Abstract. Under some mild conditions, the general form of bijective transformations of the set of all positive linear operators on a Hilbert space which preserve a symmetric mean in the sense of Kubo-Ando theory is described.

Key words. Positive operators, Mean, Automorphisms, Preservers.

AMS subject classifications. 47B49, 47A64.

*Received by the editors on March 8, 2011. Accepted for publication on August 14, 2011.
Handling Editor: Moshe Goldberg.

[†]Institute of Mathematics, University of Debrecen, H-4010 Debrecen, PO Box 12, Hungary (molnarl@science.unideb.hu, <http://www.math.unideb.hu/~molnarl/>). The author was supported by the Hungarian Scientific Research Fund (OTKA) K81166 NK81402, and by the TÁMOP 4.2.1./B-09/1/KONV-2010-0007 project implemented through the New Hungary Development Plan co-financed by the European Social Fund and the European Regional Development Fund.