Annals of Functional Analysis

Ann. Funct. Anal. 3 (2012), no. 1, 121–127
ANNALS OF FUNCTIONAL ANALYSIS
ISSN: 2008-8752 (electronic)
URL: www.emis.de/journals/AFA/

ON COMPACTNESS IN COMPLEX INTERPOLATION

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Communicated by D. Werner

ABSTRACT. We show that, in complex interpolation, an operator function that is compact on one side of the interpolation scale will be compact for all proper interpolating spaces if the right hand side (Y^0, Y^1) is reduced to a single space. A corresponding result, in restricted generality, is shown if the left hand side (X^0, X^1) is reduced to a single space. These results are derived from the fact that a holomorphic operator valued function on an open subset of $\mathbb{C}$ which takes values in the compact operators on part of the boundary is in fact compact operator valued.

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Date: Received: 4 January 2012; Accepted: 7 February 2012.
2010 *Mathematics Subject Classification.* Primary 46B70; Secondary 47B07.
Key words and phrases. Complex interpolation, compact operator function.