

SOME REMARKS ON THE RESTARTED AND AUGMENTED GMRES METHOD*

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Abstract. Starting from the residual estimates for GMRES formulated by many authors, usually in terms of the quotient of the Hermitian part and the norm of a matrix or by using the field of values of a matrix, we present more general estimates which hold also for restarted and augmented GMRES. Sufficient conditions for convergence are formulated. All estimates are independent on the choice of an initial approximation.

Key words. Linear equations, restarted and augmented GMRES method, residual bounds, non-stagnation conditions.

AMS subject classifications. 15A06, 65F10.

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