NAG Fortran Library Chapter Contents

F02 – Eigenvalues and Eigenvectors

Note: please refer to the Users' Note for your implementation to check that a routine is available.

F02 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
F02BJF**	6	All eigenvalues and optionally eigenvectors of generalized eigenproblem by QZ algorithm, real matrices (Black Box)
F02EAF**	16	All eigenvalues and Schur factorization of real general matrix (Black Box)
F02EBF**	16	All eigenvalues and eigenvectors of real general matrix (Black Box)
F02ECF	17	Selected eigenvalues and eigenvectors of real nonsymmetric matrix (Black Box)
F02FAF**	16	All eigenvalues and optionally eigenvectors of real symmetric matrix (Black Box)
F02FCF**	17	Selected eigenvalues and optionally eigenvectors of real symmetric matrix (Black Box)
F02FDF**	16	All eigenvalues and eigenvectors of real symmetric-definite generalized problem (Black Box)
F02FHF**	11	All eigenvalues of generalized banded real symmetric-definite eigenproblem (Black Box)
F02FJF	11	Selected eigenvalues and eigenvectors of sparse symmetric eigenproblem (Black Box)
F02GAF**	16	All eigenvalues and Schur factorization of complex general matrix (Black Box)
F02GBF**	16	All eigenvalues and optionally eigenvectors of complex general matrix (Black Box)
F02GCF	17	Selected eigenvalues and eigenvectors of complex nonsymmetric matrix (Black Box)
F02GJF**	8	All eigenvalues and optionally eigenvectors of generalized complex eigenproblem by QZ algorithm (Black Box)
F02HAF**	16	All eigenvalues and eigenvectors of complex Hermitian matrix (Black Box)
F02HCF**	17	Selected eigenvalues and eigenvectors of complex Hermitian matrix (Black Box)
F02HDF**	16	All eigenvalues and eigenvectors of complex Hermitian-definite generalized problem (Black Box)
F02SDF	8	Eigenvector of generalized real banded eigenproblem by inverse iteration
F02WDF	8	QR factorization, possibly followed by SVD
F02WEF**	13	SVD of real matrix (Black Box)
F02WUF	14	SVD of real upper triangular matrix (Black Box)
F02XEF**	13	SVD of complex matrix (Black Box)
F02XUF	13	SVD of complex upper triangular matrix (Black Box)

** This routine has been superseded, although it will be retained in the Library until at least Mark 23. See the document 'Advice on Replacement Calls for Withdrawn/Superseded Routines' for details of the recomended replacement routine.