

NAG Library Chapter Contents

F02 – Eigenvalues and Eigenvectors

F02 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
F02BJF	6	Computes all eigenvalues and, optionally, eigenvectors of generalized eigenproblem by QZ algorithm, real matrices (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02EAF	16	All eigenvalues and Schur factorization of real general matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02EBF	16	All eigenvalues and eigenvectors of real general matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02ECF	17	Selected eigenvalues and eigenvectors of real nonsymmetric matrix (Black Box)
F02FAF	16	Computes all eigenvalues and, optionally, eigenvectors of real symmetric matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02FCF	17	Selected eigenvalues and optionally eigenvectors of real symmetric matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02FDF	16	All eigenvalues and eigenvectors of real symmetric-definite generalized problem (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02FHF	11	All eigenvalues of generalized banded real symmetric-definite eigenproblem (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
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matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02GBF	16	Computes all eigenvalues and, optionally, eigenvectors of complex general matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02GCF	17	Selected eigenvalues and eigenvectors of complex nonsymmetric matrix (Black Box)
F02GJF	8	Computes all eigenvalues and, optionally, eigenvectors of generalized complex eigenproblem by QZ algorithm (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02HAF	16	All eigenvalues and eigenvectors of complex Hermitian matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02HCF	17	Selected eigenvalues and eigenvectors of complex Hermitian matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02HDF	16	All eigenvalues and eigenvectors of complex Hermitian-definite generalized problem (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
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) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02WGF	22	Computes leading terms in the singular value decomposition of a real general matrix; also computes corresponding left and right singular vectors
F02WUF	14	SVD of real upper triangular matrix (Black Box)
F02XEF	13	SVD of complex matrix (Black Box) Note: this routine is scheduled for withdrawal at Mark 23, see Advice on Replacement Calls for Withdrawn/Superseded Routines for further information.
F02XUF	13	SVD of complex upper triangular matrix (Black Box)
