NAG Fortran Library Routine Document

F06EPF (DROT)

Note: before using this routine, please read the Users' Note for your implementation to check the interpretation of ***bold italicised*** terms and other implementation-dependent details.

1 Purpose

F06EPF (DROT) applies a real plane rotation to two n element real vectors x and y:

$$\begin{pmatrix} x^T \\ y^T \end{pmatrix} \leftarrow \begin{pmatrix} c & s \\ -s & c \end{pmatrix} \begin{pmatrix} x^T \\ y^T \end{pmatrix}.$$

The plane rotation has the form generated by F06AAF (DROTG) or F06BAF.

2 Specification

```
SUBROUTINE F06EPF (N, X, INCX, Y, INCY, C, S)
INTEGER             N, INCX, INCY
double precision    X(*), Y(*), C, S
```

The routine may be called by its BLAS name ***drot***.

3 Description

None.

4 References

None.

5 Parameters

1: N – INTEGER *Input*

On entry: n, the number of elements in x and y.

2: X$(*)$ – ***double precision*** array *Input/Output*

On entry: the original vector x.

On exit: the transformed vector x.

3: INCX – INTEGER *Input*

On entry: the increment in the subscripts of X between successive elements of x.

4: Y$(*)$ – ***double precision*** array *Input/Output*

On entry: the original vector y.

On exit: the transformed vector y.

5: INCY – INTEGER *Input*

On entry: the increment in the subscripts of Y between successive elements of y.

6: C – ***double precision*** *Input*

On entry: the value c, the cosine of the rotation.

7: S – ***double precision*** *Input*

On entry: the value s, the sine of the rotation.

6 Error Indicators and Warnings

None.