NAG Library Routine Document

E05JKF

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

E05JKF is used to get the value of an integer E05JBF optional parameter. E05JKF can be used before or after calling E05JBF, but the initialization routine E05JAF **must** have been called before calling E05JKF.

2 Specification

```
SUBROUTINE E05JKF(OPTSTR, IVALUE, COMM, LCOMM, IFAIL)
INTEGER            IVALUE, LCOMM, IFAIL
double precision   COMM(LCOMM)
CHARACTER*(*)      OPTSTR
```

3 Description

E05JKF obtains the current value of an integer-valued optional parameter. For example

```
CALL E05JKF ('Function Evaluations Limit', NF, COMM, LCOMM, IFAIL)
```

will result in the value of the optional parameter Function Evaluations Limit being output in `NF`.

A complete list of optional parameters, their symbolic names and default values is given in Section 11 in E05JBF.

4 References

None.

5 Parameters

1: OPTSTR – CHARACTER*(*) *Input*

On entry: a string identifying an integer-valued optional parameter (as described in Section 11 in E05JBF).

2: IVALUE – INTEGER *Output*

On exit: if IFAIL $= 0$ on exit, IVALUE contains the integer value associated with the optional parameter in OPTSTR.

3: COMM(LCOMM) – ***double precision*** array *Communication Array*

On entry: communication data as initialized by E05JAF.

4: LCOMM – INTEGER *Input*

On entry: the dimension of the array COMM as declared in the (sub)program from which E05JKF is called.

Constraint: LCOMM ≥ 100.

5: IFAIL – INTEGER *Input/Output*

On entry: IFAIL must be set to 0, -1 or 1. If you are unfamiliar with this parameter you should refer to Section 3.3 in the Essential Introduction for details.

On exit: IFAIL $= 0$ unless the routine detects an error (see Section 6).

For environments where it might be inappropriate to halt program execution when an error is detected, the value -1 or 1 is recommended. If the output of error messages is undesirable, then the value 1 is recommended. Otherwise, if you are not familiar with this parameter, the recommended value is 0. **When the value -1 or 1 is used it is essential to test the value of IFAIL on exit.**

6 Error Indicators and Warnings

If on entry IFAIL $= 0$ or -1, explanatory error messages are output on the current error message unit (as defined by X04AAF).

Errors or warnings detected by the routine:

IFAIL $= 1$

On entry, LCOMM < 100,
or the initialization routine E05JAF has not been called.

IFAIL $= 2$

The optional parameter given in OPTSTR is invalid. The correct number of word 'tokens' are present but a keyword or keyword combination is invalid.

IFAIL $= 3$

The optional parameter given in OPTSTR is not associated with an integer value. See Section 11 in E05JBF for a full list of the optional parameters.

IFAIL $= 4$

The optional-parameter name contained the wrong number of word 'tokens', so could not be recognized by the routine.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

See Section 9 in E05JCF.