

# NAG Toolbox for MATLAB

## x05ac

### 1 Purpose

x05ac compares two date/time character strings, each stored in the format returned by x05ab.

### 2 Syntax

```
[result] = x05ac(ctime1, ctime2)
```

### 3 Description

x05ac compares two date/time character strings, and returns an integer that specifies which one is the earliest. The result is an integer returned through the function name, with meaning as follows:

if x05ac = -1, the first date/time string is earlier than the second;  
if x05ac = 0, the two date/time strings are equivalent;  
if x05ac = 1, the first date/time string is later than the second.

### 4 References

None.

### 5 Parameters

#### 5.1 Compulsory Input Parameters

- 1: **ctime1** – string
- 2: **ctime2** – string

The date/time strings to be compared. These are expected to be in the format returned by x05ab, although x05ac will still attempt to interpret the strings if they vary slightly from this format. See Section 8 for further details.

#### 5.2 Optional Input Parameters

None.

#### 5.3 Input Parameters Omitted from the MATLAB Interface

None.

#### 5.4 Output Parameters

- 1: **result** – int32 scalar

The result of the function.

### 6 Error Indicators and Warnings

None.

### 7 Accuracy

Not applicable.

## 8 Further Comments

For flexibility, x05ac will accept various formats for the two date/time strings **ctime1** and **ctime2**.

The strings do not have to be the same length. It is permissible, for example, to enter with one or both of the strings truncated to a smaller length, in which case missing fields are treated as zero.

Each character string may be of any length, but everything after character 80 is ignored.

Each string may or may not include an alphabetic day name, such as 'Wednesday', at its start. These day names are ignored, and no check is made that the day name corresponds correctly to the rest of the date.

The month name may contain any number of characters provided it uniquely identifies the month, however all characters that are supplied are significant.

Fields in the character string must be separated by one or more spaces.

The case of all alphabetic characters is not significant.

Any field in a date time string that is indecipherable according to the above rules will be converted to a zero value internally. Thus two strings that are completely indecipherable will compare equal.

According to these rules, all the following date/time strings are equivalent:

'Thursday 10th July 1958 12:43:17.320'

'THU 10th JULY 1958 12:43:17.320'

'10th Jul 1958 12:43:17.320'

## 9 Example

```
ctime1 = 'Thu 27th April 1989 13:15:21.320' ;
ctime2 = 'Wed 26th April 1989 11:23:14.130' ;
[result] = x05ac(ctime1, ctime2)

result =
      1
```