

**NAME**

qeeps – Quadruple-precision machine epsilon

**SYNOPSIS**

Fortran (77, 90, 95, HPF):

```
f77 [ flags ] file(s) ... -L/usr/local/lib -lgjl
```

```
REAL*16 FUNCTION qeeps(x)
```

```
REAL*16          x
```

C (K&R, 89, 99), C++ (98):

```
cc [ flags ] -I/usr/local/include file(s) ... -L/usr/local/lib -lgjl
```

Use

```
#include <gamps.h>
```

to get this prototype:

```
fortran_quadruple_precision qeeps(const fortran_quadruple_precision * x_);
```

NB: The definition of C/C++ data types **fortran\_**xxx, and the mapping of Fortran external names to C/C++ external names, is handled by the C/C++ header file. That way, the same function or subroutine name can be used in C, C++, and Fortran code, independent of compiler conventions for mangling of external names in these programming languages.

Last code modification: 27-Dec-1999

**DESCRIPTION**

Return the smallest positive number such that **(x + qeeps(x))** differs from **x**.

**SEE ALSO**

**aeeps(3)**, **deps(3)**.

**AUTHORS**

The algorithms and code are described in detail in the paper

*Algorithm xxx: Quadruple-Precision Gamma(x) and psi(x) Functions for Real Arguments*

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