

**GAMMA(III)**

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**NAME**

gamma — log gamma function

**SYNOPSIS**

**jsr pc, gamma**

**double gamma(x)**

**double x;**

**DESCRIPTION**

If  $x$  is passed (in fr0) *gamma* returns  $\ln |\Gamma(x)|$  (in fr0). The sign of  $\Gamma(x)$  is returned in the external integer *signgam*. The following C program might be used to calculate  $\Gamma$ :

```
y = gamma(x);
if (y > 88.)
    error( );
y = exp(y);
if (signgam)
    y = -y;
```

**DIAGNOSTICS**

The c-bit is set on negative integral arguments and the maximum value is returned. There is no error return for C programs.

**BUGS**

No error return from C.