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Submitter :
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Poisson Random Numbers

Subroutine subprogram `POISSN` generates a random integer $N > 0$ according to the Poisson distribution

$$Prob(N) = \frac{1}{N!} e^{-\mu} \mu^N ,$$

where $\mu > 0$ (the mean) is a constant specified by the user.

Structure:

`SUBROUTINE` subprogram
User Entry Names: `RNPSSN`, `RNPSET`
External References: `RANLUX` (V115), `RNORMX` (V120)

Usage:

```
CALL RNPSSN(AMU,N,IERR)
```

`AMU` (`REAL`) Mean μ.

`N` (`INTEGER`) The generated random number N, Poisson-distributed, with mean `AMU`.

`IERR` (`INTEGER`) Error flag.
$=$ `0` : Normal case.
$=$ `1` : `AMU` $\leq$ `0`.

For `AMU` $>$ `AMAX`, a (faster) normal approximation is made. The default value for `AMAX` is `AMAX` $=$ `88.0`. It can be reset (to smaller values only) by

```
CALL RNPSET(AMAX)
```

Timing:

Time increases with μ roughly as $\mu^{0.7}$.

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