Subject: Re: roundoff function in PV-WAVE
Posted by landers on Fri, 21 Oct 1994 15:09:13 GMT
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I can only assume what ROUND does. Seems obvious tho...

In PV-WAVE:

NINT - Rounds to nearest integer or long. Basically does
  FIX(number +/- 0.5), [+/- depends on sign of number).
  Note that the User library version available in versions 4.2 and
  before don't work right (for negative numbers).
  Std lib version in version 5.0 is good.

If you want to round to a particular number of decimal points, do something like:

rounded = NINT(number * 10^dig) / 10^dig

where

   number is the number (float or double) you want to round.

   dig is an integer or long with the number of digits to the right of the
      decimal point. Could even be negative (for left of decimal point).

Include the /Long keyword to NINT (v 5.0) if you want it to return a LONG integer rather than a FIX (usually a good idea when converting from FLOATs or DOUBLEs).

I realize that many of you may not have version 5.0 yet. Just be patient - it's on the way (as soon as they dredge the newly-formed lake and find the Houston shipping office)

Until that time, try this simple version:

```
function nint,n
;+
; i = NINT( a )
; returns the nearest integer to a, like FORTRAN's NINT func.
;-
on_error,2

n2 = fix( n + 0.5 )

neg = where( n lt 0, many )
```

if many ne 0 then n2(neg) = fix(n(neg) - 0.5)

return, n2

end

;Dave
