
Subject: Re: IDL not interpreting numbers correctly?
Posted by [rogass](#) on Wed, 31 Aug 2011 12:51:25 GMT
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On 27 Aug., 02:37, Ashley Berg <ashley.b...@gmail.com> wrote:
> I'm having a strange problem with IDL. I have an array of numbers
> that are supposed to all add up to 100. So to check, I say:
>
> bad = where(array gt 100. or array lt 100.)
>
> and it says it finds 4 numbers that meet this criteria. However, when
> I say:
>
> print, array(bad)
>
> the numbers are all 100.000! So for some reason IDL says these
> numbers are greater than or less than 100 when actually they are equal
> to 100. Has anyone else ever had a problem like this?

Hi,
we have all the same problem :)

Maybe you can use this:

```
function cr_c,a,b,type,prec=prec
  szt = size(a,/type)+size(b,/type)
  small = (szt eq 10 or szt eq 14 or szt eq 18)? $
    (machar(/double)).eps : (machar()).eps
  prec = ~n_elements(prec)? $
    make_array(1,type=size(small,/type),value=1) : $
    make_array(1,type=size(small,/type),value=prec)
  small *= prec
  type = ~n_elements(type)? 'eq' : type
  case type of
    'eq' : return, (abs(a-b) lt small)[0]
    'ne' : return, (abs(a-b) gt small)[0]
    'lt' : return, ((b-a) gt small)[0]
    'le' : return, ((b-a) ge small)[0]
    'gt' : return, ((a-b) gt small)[0]
    'ge' : return, ((a-b) ge small)[0]
  endcase
end
```

```
IDL> help,(4.70*100.) eq 470.0
<Expression>  BYTE   = 0
IDL> help,cr_c(4.70*100.,470.0,'eq')
<Expression>  BYTE   = 0
IDL> help,cr_c(4.70*100.,470.0,'eq',prec=1000)
```

<Expression> BYTE = 1

Cheers

CR
