Subject: How to plot multiple charts and ho to round float to specific precision?
Posted by liko2@o2.pl on Wed, 27 Jul 2005 13:48:13 GMT

Hi :)

1. How to plot multiple plots (eg 8-10 on one page of A4) but not using
multiplot?
2. How to round float eg. 23,45654 to 23,46?

THX for answer :)

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Benjamin Hornberger on Thu, 28 Jul 2005 12:14:42 GMT

liko2@o2.pl wrote:
> No, this does only the rounding and output has still 4 digits after
> coma...I need to have only two digits after coma (eg. 23.46 not 23.4600)
>

It sounds like you don't want to *round* the number, but you want to
print it with a certain precision. Check the IDL help for "format
codes" and the FORMAT keyword to the STRING function and PRINT procedure.

IDL> print, 23.46, format='(f0.2)'
23.46

The "f" format code is for outputting floating point numbers. The "2"
means two digits after the decimal point. The "0" means "make the output
string just as long so that it fits".

Good luck,
Benjamin

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by liko2@o2.pl on Thu, 28 Jul 2005 12:24:15 GMT

No, it has to be a value of variable, later used for a part of title of
a chart. So it has to be exact value with only 2 digits after zero.

Subject: Re: How to plot multiple charts and ho to round float to specific precision?

Posted by liko2@o2.pl on Thu, 28 Jul 2005 13:23:41 GMT

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I meant : after coma not zero.

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by James Kuyper on Thu, 28 Jul 2005 15:46:16 GMT
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liko2@o2.pl wrote:
> No, it has to be a value of variable, later used for a part of title of
> a chart. So it has to be exact value with only 2 digits after zero.

If the only thing you're going to do with the variable is print it as
part of a title of a chart, isn't it sufficient to know how to print it
with only 2 digits after zero? Are there any calculations you intend to
perform, where it's important to use the rounded value, rather than the
exact value, in those calculations? I've seen situations where
something like that was actually the right thing to do, but they're not
very common.

If you do actually need the value of the variable rounded, and not just
the display of the variable, then the expression you've already been
given does the job:

value = ROUND(100.0*x)/100.0

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Paul Van Delst[1] on Thu, 28 Jul 2005 16:30:39 GMT
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liko2@o2.pl wrote:
> No, it has to be a value of variable, later used for a part of title of
> a chart. So it has to be exact value with only 2 digits after zero.
>

Given your floating point variable,

IDL> x=23.45654
IDL> print, x
       23.4565

you can stick it into a string variable

IDL> cx=string(x,format='(f15.2)')
IDL> help, cx

```
CX              STRING  = '        23.46'
```

Note I used the format f15.2 since you might have a number like

```
IDL> y=7140264.38264
IDL> cy=string(y,format='(f15.2)')
IDL> help, cy
CY              STRING  = '     7140264.38'
```

You'll want to leave enough room up front (via the "15" in f15.2) for the extra digits.

And then you can crop the above results to your heart's content:

```
IDL> help, strtrim(cx,2), strtrim(cy,2)
<Expression>    STRING  = '23.46'
<Expression>    STRING  = '140264.38'
```

for your plot titles.

paulv

--
Paul van Delst
CIMSS @ NOAA/NCEP/EMC

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Benjamin Hornberger on Thu, 28 Jul 2005 22:38:37 GMT
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Paul Van Delst wrote:
> liko2@o2.pl wrote:
>
>> No, it has to be a value of variable, later used for a part of title of
>> a chart. So it has to be exact value with only 2 digits after zero.
>>
>
> Given your floating point variable,
>
> IDL> x=23.45654
> IDL> print, x
>   23.4565
>
> you can stick it into a string variable
>
> IDL> cx=string(x,format='(f15.2)')
> IDL> help, cx
> CX   STRING = '   23.46'

>
> Note I used the format f15.2 since you might have a number like
>
> IDL> y=7140264.38264
> IDL> cy=string(y,format='(f15.2)')
> IDL> help, cy
> CY   STRING   = '   7140264.38'
>
> You'll want to leave enough room up front (via the "15" in f15.2) for
> the extra digits.
>
> And then you can crop the above results to your heart's content:
>
> IDL> help, strtrim(cx,2), strtrim(cy,2)
> <Expression>   STRING   = '23.46'
> <Expression>   STRING   = '140264.38'
>
> for your plot titles.
>
> paulv
>

Can't you just use a "0" in the format string ('(f0.2)') instead of
using a large number first and then trimming the string?

Benjamin

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Benjamin Hornberger on Thu, 28 Jul 2005 22:41:10 GMT
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liko2@o2.pl wrote:
> No, it has to be a value of variable, later used for a part of title of
> a chart. So it has to be exact value with only 2 digits after zero.
>

Does it have to be a numerical variable (which you still need for
calculations) or a string variable? In the former case, just round it as
described by other people and format it when you output it. If you need
a string variable, use the STRING function with the FORMAT keyword as I
described (the FORMAT keyword works the same for the STRING function and
the PRINT procedure).

Benjamin

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Paul Van Delst[1] on Thu, 28 Jul 2005 22:45:28 GMT
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Benjamin Hornberger wrote:
> Paul Van Delst wrote:
>
>> liko2@o2.pl wrote:
>>
>>> No, it has to be a value of variable, later used for a part of title of
>>> a chart. So it has to be exact value with only 2 digits after zero.
>>>
>>
>> Given your floating point variable,
>>
>> IDL> x=23.45654
>> IDL> print, x
>>   23.4565
>>
>> you can stick it into a string variable
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>> IDL> cx=string(x,format='(f15.2)')
>> IDL> help, cx
>> CX   STRING   = '   23.46'
>>
>> Note I used the format f15.2 since you might have a number like
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>> IDL> y=7140264.38264
>> IDL> cy=string(y,format='(f15.2)')
>> IDL> help, cy
>> CY   STRING   = '   7140264.38'
>>
>> You'll want to leave enough room up front (via the "15" in f15.2) for
>> the extra digits.
>>
>> And then you can crop the above results to your heart's content:
>>
>> IDL> help, strtrim(cx,2), strtrim(cy,2)
>> <Expression>   STRING   = '23.46'
>> <Expression>   STRING   = '140264.38'
>>
>> for your plot titles.
>>
>> paulv
>>
>
> Can't you just use a "0" in the format string ('(f0.2)') instead of
> using a large number first and then trimming the string?

I tried that first (based on your original post) but it didn't work for me.

IDL> print, !version
{ x86 linux unix linux 6.0.3 Feb 26 2004   32   64}
IDL> x=23.45654
IDL> cx=string(x,format='(f0.2)')
IDL> help, cx
CX   STRING   = '23.456539'
IDL> y=7140264.38264
IDL> cy=string(y,format='(f0.2)')
IDL> help, cy
CY   STRING   = '7140264.500000'

Dunno why not.

paulv

--
Paul van Delst
CIMSS @ NOAA/NCEP/EMC

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Benjamin Hornberger on Fri, 29 Jul 2005 00:52:29 GMT
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Paul Van Delst wrote:
> Benjamin Hornberger wrote:
>
>>
>> Can't you just use a "0" in the format string ('(f0.2)') instead of
>> using a large number first and then trimming the string?
>
>
> I tried that first (based on your original post) but it didn't work for me.
>
> IDL> print, !version
> { x86 linux unix linux 6.0.3 Feb 26 2004   32   64}
> IDL> x=23.45654
> IDL> cx=string(x,format='(f0.2)')
> IDL> help, cx
> CX   STRING   = '23.456539'
> IDL> y=7140264.38264
> IDL> cy=string(y,format='(f0.2)')
> IDL> help, cy
> CY   STRING   = '7140264.500000'
>
> Dunno why not.

```
>
> paulv
>

IDL> print, !version
{ x86 Win32 Windows Microsoft Windows 6.1.1 Oct 11 2004     32     64}
IDL> x=23.45654
IDL> cx=string(x,format='(f0.2)')
IDL> help,cx
CX              STRING    = '23.46'
IDL> y=7140264.38264
IDL> cy=string(y,format='(f0.2)')
IDL> help,cy
CY              STRING    = '7140264.50'
```

Bug or feature?

Benjamin

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by Benjamin Hornberger on Fri, 29 Jul 2005 00:54:47 GMT
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BTW:

```
IDL> print,!version
{ x86 linux unix linux 6.1.1 Oct 11 2004     32     64}
IDL> x=23.45654
IDL> cx=string(x,format='(f0.2)')
IDL> help,cx
CX              STRING    = '23.46'
IDL> y=7140264.38264
IDL> cy=string(y,format='(f0.2)')
IDL> help,cy
CY              STRING    = '7140264.50'
IDL>
```

Maybe it was a bug in IDL 6.0.x ...

Benjamin

Subject: Re: How to plot multiple charts and ho to round float to specific precision?
Posted by liko2@o2.pl on Wed, 03 Aug 2005 08:19:54 GMT
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Ok it does the thing - THX