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Subject: Re: inexplicable LONG() - behaviour  
Posted by [thompson](#) on Wed, 07 Sep 1994 13:51:09 GMT  
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frank@chaos.uni-frankfurt.dbp.de (Frank Hoffsuemmer) writes:

> Hello,

> I'm using IDL 3.1.1 (no update in sight :-( ) under HP-UX.

> And there are some strange things happening....

> Of course, these are just things that I understand wrong :), so could someone

> please explain this behaviour:

> IDL. Version 3.1.1 (hp-ux hp\_pa).

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>

> X-IDL> print, long(1231231434.1)

> 1231231488

This behavior exists in IDL 3.5 as well.

The reason for this is quite simple. The argument to the LONG function is a floating point number. The way you've phrased the statement, it's a \*single\* \*precision\* floating point number. Thus, it's already lost accuracy before you even get to converting it to a long integer. You can see this by entering the following command:

```
IDL> print, 1231231434.1, format='(f20.1)'  
1231231488.0
```

On the other hand, if you define the floating point constant to be double precision, then it works fine, i.e.

```
IDL> print, long(1231231434.1d0)  
1231231434
```

Bill Thompson

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