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Subject: Re: what is i in idl 4.0 ?  
Posted by [davidf](#) on Mon, 09 Aug 1999 07:00:00 GMT  
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John Stanly Videen (user@internet.com) writes:

```
> Does anyone know what the system variable representation for i is in idl
> 4.0?
>
> [ where i = sqrt(-1) ]
>
> In idl 3.6, it used to be !j, but this doesn't seem to work in 4.0....
>
> eg. this code works in 3.6, but not 4.0:
>
>   phase=atan(imaginary(data_ref), float(data_ref))
>   temp=exp(- phase * !j )
>   data=temp*data
```

I've been hanging around IDL for a LONG time, but I've never heard of a system variable named !J. I'm going to guess that this was a system variable that a user created in a startup file in your IDL 3.6 distribution that is not being created in your IDL 4.0 distribution.

But then again, IDL 3.6 was s-o-o-o long ago, that maybe something like this did exist and I've forgotten about it. There are days I feel like I've forgotten more about IDL than I currently know. :-(

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Toll-Free IDL Book Orders: 1-888-461-0155

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Subject: Re: what is i in idl 4.0 ?  
Posted by [gurman](#) on Tue, 10 Aug 1999 07:00:00 GMT  
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In article <MPG.121944d029ce458c989885@news.frii.com>, [davidf@dfanning.com](mailto:davidf@dfanning.com) (David Fanning) wrote:

> But then again, IDL 3.6 was s-o-o-o long ago, that  
> maybe something like this did exist and I've forgotten  
> about it. There are days I feel like I've forgotten more  
> about IDL than I currently know. :-(

David -

I suspect that you've forgotten more about IDL than most of us lurkers  
will \_ever\_ know. :-)

Joe

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| Joseph B. Gurman, NASA Goddard Space Flight Center, Solar Physics  
| Branch, Greenbelt MD 20771 USA / Federal employees are still  
| prohibited from holding opinions while at work. Therefore, any  
| opinions expressed herein are somebody else's.

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Subject: Re: what is i in idl 4.0 ?

Posted by [Richard G. French](#) on Tue, 10 Aug 1999 07:00:00 GMT

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John Stanly Videen wrote:

>  
> Help,  
>  
> Does anyone know what the system variable representation for i is in idl  
> 4.0?  
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> [ where i = sqrt(-1) ]  
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> In idl 3.6, it used to be !j, but this doesn't seem to work in 4.0....  
>  
> eg. this code works in 3.6, but not 4.0:  
>  
> phase=atan(imaginary(data\_ref), float(data\_ref))  
> temp=exp(- phase \* !j )  
> data=temp\*data  
>  
> john

I agree with David Fanning. Try putting this in your startup file:

```
DEFSYSV,'!j',dcomplex([0.d0,1.d0])
```

then, for example, you can do

```
IDL> print,exp(!J*!dpi/4)
( 0.70710678, 0.70710678)
```

Dick French

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