
Subject: Re: Writing $\exp(-j\pi)$ in IDL
Posted by [Yngvar Larsen](#) on Mon, 04 Jan 2016 10:11:40 GMT
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You could define

```
j = complex(0,1) ; single precision
```

or

```
j = dcomplex(0,1) ; double precision
```

Note also that for purely imaginary input, the following is much faster than $\text{EXP}(j \cdot \text{OFFSET_DEG} \cdot \text{!dtr})$ if `OFFSET_DEG` is a large array:

```
offset_rad = offset_deg*!dtr  
ph_offset = complex(sin(offset_rad), cos(offset_rad)) ; single precision
```

or

```
offset_rad = offset_deg*!const.dtr  
ph_offset = dcomplex(sin(offset_rad), cos(offset_rad)) ; double precision
```

--

Yngvar

On Monday, 4 January 2016 10:08:41 UTC+1, algha...@gmail.com wrote:

> Hi

>

> I was trying to write a code and I have problem with the $-j$ as the following in IDL

>

> `Phase = array_VV*conj(array_HH*exp(j*pi/180))`

>

> `Result_Phase = image(180/!pi*ATAN(Phase*exp(-j*Offset_degree/180*0)))`

>

> I had problem with defining the $-j$ and j and do not know how to do it in IDL is there other way?

>

> I'm trying the same thing in MATLAB as follow and it's working

>

> `Phase = array_VV*conj(array_HH*exp(j*pi*0))`

>

> `imagesc(180/pi*angle(Phase*exp(-j*Offset_degree/180*pi)))`

>

> I guess I did not present j and $-j$ and there is a way of doing it in IDL

>
> Thanks
