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Subject: Re: scalar system variable as single element array  
Posted by [lecacheux.alain](#) on Sun, 13 May 2012 23:58:52 GMT  
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On 13 mai, 22:00, fawltylangu...@gmail.com wrote:

> Hi guys,  
>  
> the IDL help says that a scalar can be considered a single element array. So why is the following expression failing?  
>  
> IDL> help, !pi[0]  
> % Expression must be an array in this context: !PI.  
> % Execution halted at: \$MAIN\$  
>  
> Is it a bug or feature :-)  
>  
> regards,  
> Lajos  
>  
>

Because, in IDL, as far as I know, scalar and array are two different things!

!pi is not an array, but [!pi] is. If a scalar could be considered as a single element array, the IDL implicit dimension rule would fail:

```
IDL> help,indgen(10) + !pi
<Expression>  FLOAT  = Array[10]
IDL> help,indgen(10) + [!pi]
<Expression>  FLOAT  = Array[1]
```

Conversely, a single element array cannot be considered as a scalar, unless you explicitly address it:

```
IDL> help,indgen(10) + ([!pi])[0]
<Expression>  FLOAT  = Array[10]
```

Cheers,  
alx.

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