Subject: Subtracting from double complex array
Posted by alghafisuct on Sat, 09 Jan 2016 14:53:46 GMT
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Hi all

I have a double complex array for example 500 by 500 and I want to subtract (3.5e14 + j 2.5e12) from all the values in the complex array that I have... Is there a way of doing it in IDL

Thanks

Subject: Re: Subtracting from double complex array
Posted by Jim Pendleton on Sat, 09 Jan 2016 21:02:04 GMT
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On Saturday, January 9, 2016 at 7:53:59 AM UTC-7, algha...@gmail.com wrote:
> Hi all
>
> I have a double complex array for example 500 by 500 and I want to subtract (3.5e14 + j 2.5e12) from all the values in the complex array that I have... Is there a way of doing it in IDL
>
> Thanks

IDL> a = dcomplexarr(500, 500) ; your array, simulated with zeroes
IDL> a -= dcomplex(3.5d14, 2.5d12) ; subtracts the scalar from all elements
IDL> print, a[0]
(-3.5000000e+014, -2.5000000e+012)

Jim P.

Subject: Re: Subtracting from double complex array
Posted by alghafisuct on Sun, 10 Jan 2016 10:18:59 GMT
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On Saturday, January 9, 2016 at 1:02:09 PM UTC-8, Jim P wrote:
> On Saturday, January 9, 2016 at 7:53:59 AM UTC-7, algha...@gmail.com wrote:
>> Hi all
>>
>> I have a double complex array for example 500 by 500 and I want to subtract (3.5e14 + j 2.5e12) from all the values in the complex array that I have... Is there a way of doing it in IDL
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> IDL> print, a[0]
> (-3.5000000e+014, -2.5000000e+012)
>
> Jim P.

Thanks Jim I tried what you gave me and seems like not getting what I want. I have the following:

array_HV = make_array(5000, 5359, /dcomplex, /nozero)
filename_HV = ('C:\Users\asus\Desktop\Metasensing\IDL_PROJECTS\20151021115
853_12_SAR_CPLX_0_pres_8.dat')
OPENR, importUnit, filename_HV, /GET_LUN
READU, importUnit, array_HV
CLOSE, importUnit
FREE_LUN, importUnit

array_HV = dcomplexarr(5000, 5359) ; your array, simulated with zeroes
array_HV -= dcomplex(3.6435137d11, 1.6869517d12) ; subtracts the scalar from all elements
print, array_HV[0]

The value of array_HV at [2798,2263] is (3.6435137d11, 1.6869517d12) so if I subtract it should read zero when I write print, array_HV- [2798,2263] but It did not give me zero. It is giving the following:

IDL> print, ARRAY_HV -[2798,2263]
(3.6435137e+011, 1.6869517e+012)(3.6435137e+011, 1.6869517e+012)
IDL> print, ARRAY_HV [2798,2263]
(3.6435137e+011, 1.6869517e+012)

Hope you got my point

Thanks

Subject: Re: Subtracting from double complex array
Posted by Jim Pendleton on Mon, 11 Jan 2016 02:21:32 GMT
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On Sunday, January 10, 2016 at 3:19:06 AM UTC-7, algha...@gmail.com wrote:
> On Saturday, January 9, 2016 at 1:02:09 PM UTC-8, Jim P wrote:
>> On Saturday, January 9, 2016 at 7:53:59 AM UTC-7, algha...@gmail.com wrote:
>>> Hi all
>>>
>>> I have a double complex array for example 500 by 500 and I want to subtract (3.5e14 + j
2.5e12) from all the values in the complex array that I have... Is there a way of doing it in IDL
>>>
>>> Thanks
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>> IDL> a = dcomplexarr(500, 500) ; your array, simulated with zeroes

>> IDL> a -= dcomplex(3.5d14, 2.5d12) ; subtracts the scalar from all elements
>> IDL> print, a[0]
>> (-3.5000000e+014, -2.5000000e+012)
>>
>> Jim P.
>
> Thanks Jim I tried what you gave me and seems like not getting what I want. I have the following:
>
> array_HV = make_array(5000, 5359, /dcomplex, /nozero)
> filename_HV = ('C:\Users\asus\Desktop\Metasensing\IDL_PROJECTS\20151021115853_12_SAR_CPLX_0_pres_8.dat')
> OPENR, importUnit, filename_HV, /GET_LUN
> READU, importUnit, array_HV
> CLOSE, importUnit
> FREE_LUN, importUnit
>
> array_HV = dcomplexarr(5000, 5359) ; your array, simulated with zeroes
> array_HV -= dcomplex(3.6435137d11, 1.6869517d12) ; subtracts the scalar from all elements
> print, array_HV[0]
>
> The value of array_HV at [2798,2263] is (3.6435137d11, 1.6869517d12) so if I subtract it should read zero when I write print, array_HV- [2798,2263] but It did not give me zero. It is giving the following:
>
> IDL> print, ARRAY_HV -[2798,2263]
> (3.6435137e+011, 1.6869517e+012)(3.6435137e+011, 1.6869517e+012)
> IDL> print, ARRAY_HV [2798,2263]
> (3.6435137e+011, 1.6869517e+012)
>
> Hope you got my point
>
> Thanks

Maybe this is just a misunderstanding of IDL's syntax, or perhaps a typo on your part.

The following expression subtracts the two-element vector of *integer* values 2798 and 2263 from ARRAY_HV:

IDL> print, ARRAY_HV - [2798,2263]

If your intent is to subtract an array element's value from all other elements in the array, you would write that as

IDL> result = ARRAY_HV - ARRAY_HV[2798,2263]
IDL> print, result[2798, 2263]