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Subject: How to convert Julian date into Gregorian date format in IDL?

Posted by [Muhammad Hasan](#) on Wed, 19 Nov 2014 13:34:44 GMT

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Hi All!

I have a little problem in IDL. How to calculate Gregorian date in IDL from Julian date? For example I have Julian date 335 and I want to get yyyyymmdd format. How to get it?

Regards,

Hasan

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [Michael Galloy](#) on Wed, 19 Nov 2014 14:22:06 GMT

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On 11/19/14, 6:34 am, Muhammad Hasan wrote:

> Hi All! I have a little problem in IDL. How to calculate Gregorian  
> date in IDL from Julian date? For example I have Julian date 335 and  
> I want to get yyyyymmdd format. How to get it?

>

> Regards,

>

> Hasan

>

IDL> julday = systime(/julian)

IDL> print, string(julday, format='(C(CYI04, CMOI02, CDI02))')

20141119

--

Michael Galloy

[www.michaelgalloy.com](http://www.michaelgalloy.com)

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [mick.mitanirc3](#) on Wed, 19 Nov 2014 17:13:05 GMT

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On Wednesday, November 19, 2014 7:34:46 AM UTC-6, Muhammad Hasan wrote:

> Hi All!

> I have a little problem in IDL. How to calculate Gregorian date in IDL from Julian date? For example I have Julian date 335 and I want to get yyyyymmdd format. How to get it?

>  
> Regards,  
>  
> Hasan

While systime works great for today, when I am working with other julian day values and need to convert them I use the JD2DATE program. Originally from John Hopkins it can be found at Exelis along with many other JHU/APL routines. Check out <http://www.exelisvis.com/docs/jd2date.html>

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [David Fanning](#) on Wed, 19 Nov 2014 17:33:00 GMT

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mick.mitanirc3@gmail.com writes:

>  
> On Wednesday, November 19, 2014 7:34:46 AM UTC-6, Muhammad Hasan wrote:  
>> Hi All!  
>> I have a little problem in IDL. How to calculate Gregorian date in IDL from Julian date?  
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to convert them I use the JD2DATE program. Originally from John Hopkins it can be found at  
Exelis along with many other JHU/APL routines. Check out  
<http://www.exelisvis.com/docs/jd2date.html>

If you have the Coyote Library installed (I why wouldn't you?), you can  
used cgJulian2Date to do this, too. There are 21 different data formats  
you can choose to use.

<http://www.idlcoyote.com/idldoc/cg/cgjulian2date.html>

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

---

Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [mick.mitanirc3](#) on Wed, 19 Nov 2014 18:00:26 GMT

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Dave I can answer that. It's the "Not Invented Here" mentality.

I got away with using the JHU routines because we have associated with them on other projects. While I find your site and these posts to be invaluable resources, the powers that be that I work for control my working environment tightly. We just barely got upgraded to IDL 8.0 this year and that was from 6.1. I'm still trying to get my coworkers to use IDL commands introduced after version 5.3.

If we're lucky we'll see 8.4 in the next year, according to our sys-admin. Maybe we'll be allowed to add in your library when we upgrade IDL.

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [David Fanning](#) on Wed, 19 Nov 2014 18:23:29 GMT

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mick.mitanirc3@gmail.com writes:

>  
> Dave I can answer that. It's the "Not Invented Here" mentality.  
>  
> I got away with using the JHU routines because we have associated with them on other projects. While I find your site and these posts to be invaluable resources, the powers that be that I work for control my working environment tightly. We just barely got upgraded to IDL 8.0 this year and that was from 6.1. I'm still trying to get my coworkers to use IDL commands introduced after version 5.3.  
>  
> If we're lucky we'll see 8.4 in the next year, according to our sys-admin. Maybe we'll be allowed to add in your library when we upgrade IDL.

Ah, I can help you write a little program in IDL that changes all the "cg" file extensions to your initials. You look like a hero and get the big raise! :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Sepore ma de ni thue. ("Perhaps thou speakest truth.")

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [Muhammad Hasan](#) on Thu, 20 Nov 2014 09:28:43 GMT

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On Wednesday, November 19, 2014 10:22:09 PM UTC+8, Mike Galloy wrote:

> On 11/19/14, 6:34 am, Muhammad Hasan wrote:

>> Hi All! I have a little problem in IDL. How to calculate Gregorian

>> date in IDL from Julian date? For example I have Julian date 335 and

>> I want to get yyyyymmdd format. How to get it?

>>

>> Regards,

>>

>> Hasan

>>

>

> IDL> julday = systime(/julian)

> IDL> print, string(julday, format='(C(CYI04, CMOI02, CDI02))')

> 20141119

>

> --

> Michael Galloy

> [www.michaelgalloy.com](http://www.michaelgalloy.com)

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> Research Mathematician

> Tech-X Corporation

Thanks a lot dear Dr. Galloy. You mean it will convert my julian date 213 for 2010 into August 1, 2010?

Regards,

---

---

Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [Muhammad Hasan](#) on Thu, 20 Nov 2014 09:29:53 GMT

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On Thursday, November 20, 2014 1:33:03 AM UTC+8, David Fanning wrote:

> mick.mitanirc3@gmail.com writes:

>

>>

>> On Wednesday, November 19, 2014 7:34:46 AM UTC-6, Muhammad Hasan wrote:

>>> Hi All!

>>> I have a little problem in IDL. How to calculate Gregorian date in IDL from Julian date? For example I have Julian date 335 and I want to get yyyyymmdd format. How to get it?

>>>

>>> Regards,

>>>

>>> Hasan

>>  
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>  
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> used cgJulian2Date to do this, too. There are 21 different data formats  
> you can choose to use.  
>  
> <http://www.idlcoyote.com/idldoc/cg/cgjulian2date.html>  
>  
> Cheers,  
>  
> David  
> --  
> David Fanning, Ph.D.  
> Fanning Software Consulting, Inc.  
> Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>  
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Thanks Dr. Fanning.

Regards,

---

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [Muhammad Hasan](#) on Thu, 20 Nov 2014 09:31:34 GMT

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On Thursday, November 20, 2014 1:13:07 AM UTC+8, mick.mi...@gmail.com wrote:

> On Wednesday, November 19, 2014 7:34:46 AM UTC-6, Muhammad Hasan wrote:

>> Hi All!

>> I have a little problem in IDL. How to calculate Gregorian date in IDL from Julian date? For example I have Julian date 335 and I want to get yyymmdd format. How to get it?

>>

>> Regards,

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>> Hasan

>

> While systime works great for today, when I am working with other julian day values and need to convert them I use the JD2DATE program. Originally from John Hopkins it can be found at Exelis along with many other JHU/APL routines. Check out <http://www.exelisvis.com/docs/jd2date.html>

Thanks a lot.

Regards,

---

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?  
Posted by [Michael Galloy](#) on Thu, 20 Nov 2014 18:21:36 GMT  
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On 11/20/14, 2:28 AM, Muhammad Hasan wrote:

> On Wednesday, November 19, 2014 10:22:09 PM UTC+8, Mike Galloy wrote:

>> On 11/19/14, 6:34 am, Muhammad Hasan wrote:

>>> Hi All! I have a little problem in IDL. How to calculate Gregorian

>>> date in IDL from Julian date? For example I have Julian date 335 and

>>> I want to get yyyyymmdd format. How to get it?

>>>

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>>

>> IDL> julday = systime(/julian)

>> IDL> print, string(julday, format='(C(CYI04, CMOI02, CDI02))')

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>>

>> --

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>> Research Mathematician

>> Tech-X Corporation

>

> Thanks a lot dear Dr. Galloy. You mean it will convert my julian date 213 for 2010 into August 1, 2010?

>

> Regards,

>

I did that calculation on November 19, 2014, which it converted to 20141119 (YYYYMMDD, which I thought was the format you wanted?). I just used today's date because it was the easiest way to get a Julian date.

Mike

--

Michael Galloy

[www.michaelgalloy.com](http://www.michaelgalloy.com)

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?  
Posted by [mick.mitanirc3](#) on Thu, 20 Nov 2014 22:14:00 GMT

I think the disconnect here is between Julian Date and Julian Day of Year (DOY).

Mr. Hasan's value of 213 is a Julian Day of Year value, in this case 213 days into year 2010. Systime with the /Julian flag returns the Julian Date value - the number of seconds elapsed since 00:00:00 Jan 1 1970 UTC (commonly called the Unix or POSIX Epoch).

The military often use Julian DOY in the form of YYYYDOY or YYDOY and unfortunately usually call the result a Julian Date which wasn't a problem until us programmers came around with our date/time functions.

The JHU library function I mentioned in my first reply works with Julian DOY.

---

---

Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [Michael Galloy](#) on Thu, 20 Nov 2014 22:51:14 GMT

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---

On 11/20/14, 3:14 PM, mick.mitanirc3@gmail.com wrote:

- > I think the disconnect here is between Julian Date and Julian Day of
- > Year (DOY).
- >
- > Mr. Hasan's value of 213 is a Julian Day of Year value, in this case
- > 213 days into year 2010. Systime with the /Julian flag returns the
- > Julian Date value - the number of seconds elapsed since 00:00:00 Jan
- > 1 1970 UTC (commonly called the Unix or POSIX Epoch).
- >
- > The military often use Julian DOY in the form of YYYYDOY or YYDOY and
- > unfortunately usually call the result a Julian Date which wasn't a
- > problem until us programmers came around with our date/time
- > functions.
- >
- > The JHU library function I mentioned in my first reply works with
- > Julian DOY.
- >

Ah, got it! I have not heard DOY called a Julian date.

--

Michael Galloy

[www.michaelgalloy.com](http://www.michaelgalloy.com)

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Subject: Re: How to convert Julian date into Gregorian date format in IDL?

Posted by [David Fanning](#) on Thu, 20 Nov 2014 22:59:32 GMT

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mick.mitanirc3@gmail.com writes:

- >
- > I think the disconnect here is between Julian Date and Julian Day of Year (DOY).
- >
- > Mr. Hasan's value of 213 is a Julian Day of Year value, in this case 213 days into year 2010. Systemtime with the /Julian flag returns the Julian Date value - the number of seconds elapsed since 00:00:00 Jan 1 1970 UTC (commonly called the Unix or POSIX Epoch).
- >
- > The military often use Julian DOY in the form of YYYYDOY or YYDOY and unfortunately usually call the result a Julian Date which wasn't a problem until us programmers came around with our date/time functions.
- >
- > The JHU library function I mentioned in my first reply works with Julian DOY.

I just want to point out that the built-in Julday function (in conjunction with CalDat) can also handle the Day of Year number.

```
IDL> date = 2007118L
IDL> year = Fix(StrMid(StrTrim(date,2), 0, 4))
IDL> dayofyear = Fix(StrMid(StrTrim(date,2), 4, 3))
IDL> CALDAT, JULDAY(1, dayofyear, year), month, day
IDL> Print, month, day
      4      28
```

You can learn more here:

[http://www.idlcoyote.com/code\\_tips/dayofyear.html](http://www.idlcoyote.com/code_tips/dayofyear.html)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

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