
Subject: how can you convert CMIP5 model output time ?

Posted by [siumtesfai](#) on Wed, 23 Jul 2014 19:59:49 GMT

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how can you convert CMIP5 model output time to the Julian day?

Subject: Re: how can you convert CMIP5 model output time ?

Posted by [Michael Galloy](#) on Wed, 23 Jul 2014 20:45:25 GMT

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On 7/23/14, 1:59 PM, siumtesfai@gmail.com wrote:

> how can you convert CMIP5 model output time to the Julian day?

It looks like CMIP5 model output time is specified in days since some basetime, bt, specified by the user (looks like it is given in the "units" attribute to the variable), so something like:

```
jday = output_day + julday(bt_year, bt_month, bt_day, ...)
```

should do it.

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Research Mathematician

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Subject: Re: how can you convert CMIP5 model output time ?

Posted by [siumtesfai](#) on Wed, 23 Jul 2014 21:00:56 GMT

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On Wednesday, July 23, 2014 3:59:49 PM UTC-4, siumt...@gmail.com wrote:

> how can you convert CMIP5 model output time to the Julian day?

Here is example CMIP5 model output

```
netcdf sfcWind_Amon_CSIRO-Mk3-6-0_historical_r10i1p1_185001-200512 {  
dimensions:
```

```
    time = UNLIMITED ; // (1872 currently)
```

```
    lat = 96 ;
```

```
    lon = 192 ;
```

```
    bnds = 2 ;
```

```
variables:
```

```
double time(time) ;
    time:bounds = "time_bnds" ;
    time:units = "days since 1850-01-01 00:00:00" ;
    time:calendar = "noleap" ;
    time:axis = "T" ;
    time:long_name = "time" ;
    time:standard_name = "time" ;
double time_bnds(time, bnds) ;
double lat(lat) ;
    lat:bounds = "lat_bnds" ;
    lat:units = "degrees_north" ;
    lat:axis = "Y" ;
    lat:long_name = "latitude" ;
    lat:standard_name = "latitude" ;
double lat_bnds(lat, bnds) ;
double lon(lon) ;
    lon:bounds = "lon_bnds" ;
    lon:units = "degrees_east" ;
    lon:axis = "X" ;
    lon:long_name = "longitude" ;
    lon:standard_name = "longitude" ;
double lon_bnds(lon, bnds) ;
double height ;
    height:units = "m" ;
    height:axis = "Z" ;
    height:positive = "up" ;
    height:long_name = "height" ;
    height:standard_name = "height" ;
float sfcWind(time, lat, lon) ;
    sfcWind:standard_name = "wind_speed" ;
    sfcWind:long_name = "Near-Surface Wind Speed" ;
```

Subject: Re: how can you convert CMIP5 model output time ?

Posted by [siumtesfai](#) on Thu, 24 Jul 2014 00:37:56 GMT

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On Wednesday, July 23, 2014 3:59:49 PM UTC-4, siumt...@gmail.com wrote:

> how can you convert CMIP5 model output time to the Julian day?

Any solution about how to handle the time array in CMIP5 model daily output.

Subject: Re: how can you convert CMIP5 model output time ?

Posted by [Fabzi](#) on Thu, 24 Jul 2014 08:44:45 GMT

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On 24.07.2014 02:37, siumtesfai@gmail.com wrote:

> Any solution about how to handle the time array in CMIP5 model daily output.

You answered your own question by printing the variable's attributes:

```
double time(time) ;  
    time:bounds = "time_bnds" ;  
    time:units = "days since 1850-01-01 00:00:00" ;
```

And Michael gave you the "formula" to use.

So, what did you try and why didn't it work as expected?

Subject: Re: how can you convert CMIP5 model output time ?

Posted by [siumtesfai](#) on Fri, 25 Jul 2014 00:00:35 GMT

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On Thursday, July 24, 2014 4:44:45 AM UTC-4, Fabien wrote:

> On 24.07.2014 02:37, siumtesfai@gmail.com wrote:

>

>> Any solution about how to handle the time array in CMIP5 model daily output.

>

>

>

> You answered your own question by printing the variable's attributes:

>

>

>

> double time(time) ;

>

> time:bounds = "time_bnds" ;

>

> time:units = "days since 1850-01-01 00:00:00" ;

>

>

>

> And Michael gave you the "formula" to use.

>

>

>

> So, what did you try and why didn't it work as expected?

Yes I tried

```
time=time+julday(1850,1,1,0,0,0)
```

```
Caldat,month,year,day
```

It did not work for me.

I should be able to see time ranging from Jan 1850 to Dec 2005 (1872 months). I can create my own time ($\text{time} = \text{findgen}(1872)/12. + 1850$)

Subject: Re: how can you convert CMIP5 model output time ?

Posted by [Fabzi](#) on Fri, 25 Jul 2014 08:51:37 GMT

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On 25.07.2014 02:00, siumtesfai@gmail.com wrote:

> It did not work for me.

Well if you really want help you will need to be more specific.

> I can create my own time ($\text{time} = \text{findgen}(1872)/12. + 1850$)

... whatever works for you is good for me ;-)
