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Subject: Tool for converting FK4/FK5  
Posted by [Miguel](#) on Thu, 05 May 2016 13:48:40 GMT  
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Hi,

I am currently working with two fits files but with different coordinates system.  
One is the FK4 (B1950) and the other is FK5 (J2000) and I would like to know if there is a procedure in IDL to convert from one to another.  
I have found the (j/b)precess but it works for only for one position and hprecess converts only the equinox in the FK5 system.

I prefer IDL but if you know something in Python, it would be great.

Thanks for your help.

Miguel

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Subject: Re: Tool for converting FK4/FK5  
Posted by [wlandsman](#) on Thu, 05 May 2016 14:46:10 GMT  
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Have you tried vector input for jprecess.pro

<http://idlastro.gsfc.nasa.gov/ftp/pro/astro/jprecess.pro>

It seems to work for me.

```
a = [3.24,23.44,31.66]
dec = [-0.23,22.44,34.44]
mu_radec = [ [3.2,2.3],[0,0.1],[-2.3,1.2]]
jprecess,ra,dec,ra2,dec2,mu_radec=mu_radec
```

Also, you can always just loop over calls to any procedure that only processes scalars.

--Wayne

On Thursday, May 5, 2016 at 9:48:42 AM UTC-4, miguelfigue...@gmail.com wrote:

```
> Hi,
>
> I am currently working with two fits files but with different coordinates system.
> One is the FK4 (B1950) and the other is FK5 (J2000) and I would like to know if there is a
> procedure in IDL to convert from one to another.
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> the equinox in the FK5 system.
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> I prefer IDL but if you know something in Python, it would be great.
```

>  
> Thanks for your help.  
>  
> Miguel

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Subject: Re: Tool for converting FK4/FK5  
Posted by [wlandsman](#) on Thu, 05 May 2016 14:50:41 GMT  
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Oops, I just realize what you meant by "one position" -- you want to transform the FITS headers.

Although it is not documented, HPRECESS does calls jprecess if the input year is 1950 and the output year is 2000, and calls bprecess if the input year is 2000 and the output year is 1950. This is just what (I think) you want.

On Thursday, May 5, 2016 at 9:48:42 AM UTC-4, miguelfigue...@gmail.com wrote:

> Hi,  
>  
> I am currently working with two fits files but with different coordinates system.  
> One is the FK4 (B1950) and the other is FK5 (J2000) and I would like to know if there is a procedure in IDL to convert from one to another.  
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>  
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> Miguel

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Subject: Re: Tool for converting FK4/FK5  
Posted by [Miguel](#) on Thu, 05 May 2016 23:27:08 GMT  
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So my 1950-fits is well converted to fk5-fits using hprecess ?  
That's what I used but I noted that there is a slight difference between the converted file and a another fits representing the same region and already in the fk5 system.

Does a different projection (RA--SIN for one, RA--GLS for the other) could lead to this difference ?

Miguel

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