Subject: Re: How to label a time axes on an image?
Posted by steven.abel on Tue, 17 May 2016 08:17:12 GMT
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On Monday, 16 May 2016 16:29:52 UTC+1, alx wrote:
> Le lundi 16 mai 2016 14:30:56 UTC+2, steve...@metoffice.gov.uk a écrit :
>> On Monday, 16 May 2016 13:07:13 UTC+1, steve...@metoffice.gov.uk wrote:
>>> On Monday, 16 May 2016 12:26:47 UTC+1, Steve wrote:
>>>> Hi
>>>>
>>>> I am having trouble labeling a time axis on an image. Here is some test code
>>>>
>>>> ;create a randomn image for testing
>>>> data = RANDOMU(seed,1800,401)
>>>> img = BYTSCL(data)
>>>>
>>>> ;data values that I would like to use for labeling the axes
>>>> xval = FINDGEN(1800)/(60.*60.*24.) + JULDAY(11,24,2014,11,15,00)
>>>> yval = FINDGEN(401)-200.
>>>>
>>>> ;plot the image and label the axes
>>>> im = IMAGE(img, RGB_TABLE=0,MARGIN=0.2)
>>>> yax = AXIS('Y', LOCATION=[0,0], TICKDIR=1, MINOR=0,
COORD_TRANSFORM=[yval[0],1])
>>>> xax = AXIS('X', LOCATION=[0,0], TICKDIR=1, MINOR=0, TICKFORMAT='(C(CHI2.2, ":",
CMI2.2))', COORD_TRANSFORM=[xval[0],1.])
>>>>
>>>> I am using COORD_TRANSFORM in the call to AXIS to try and convert the pixel number of the image to what I would like to display. In the example above this works for the yaxis which simply changes the axis data values. For the xaxis I am also trying to display it in a time format as HH:MM but all of the axes labels display as 00:00.
>>>>
>>>> Any idea how I can label the xaxis correctly?
>>>>
>>>> Thanks
>>>>
>>>> Steve
>>>
>>> Just spotted an error in my test code. The xaxis should be
>>>
>>> xax = AXIS('X', LOCATION=[0,0], TICKDIR=1, MINOR=0, TICKFORMAT='(C(CHI2.2, ":",
CMI2.2))', COORD_TRANSFORM=[xval[0],1./(60.*60.*24.)])
>>>
>>> This does put what look to be about the correct times but they all overlay each other on the axis. Something is not quite right!
>>>
>>> Steve
>>

>> OK so a little more playing around with this and I guess the problem may be due to COORD_TRANSFORM not using double precision, such that when it displays the time values on the xaxis they end up overlaying each other. Perhaps someone can confirm.
>>
>> So a big fudge to get this to work is to change
>>
>> xval = FINDGEN(1800)/(60.*60.*24.) + JULDAY(11,24,-4712,11,15,00)
>>
>> such that the data values put into COORD_TRANSFORM are not as large. Clearly I wouldn't be able to display the time axis with the year labeled in this case.
>>
>> If anyone has a better solution to the above that would be great.
>>
>> Steve
>
> Don't use your axis trick.
> Simply use the IMAGE function with AXIS_STYLE=2 and ASPECT_RATIO=0. The IMAGE_DIMENSIONS and IMAGE_LOCATION keywords will directly set the correct axes.
> alx.

Thanks alx. That works!
