Subject: Re: Reversing Object Graphics Axis Range
Posted by Mark Hadfield on Thu, 25 Oct 2001 19:49:14 GMT
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From: "David Fanning" <david@dfanning.com>
> I had occasion the other day to require a reverse
> object graphics axis (Ie., one that went from 1.2
> at the bottom of the axis to 0 on the top....
>
> I figured out a way (eventually) to get what I wanted,
> but I ran into all kinds of interesting "features"
> in the process. I was going to write my observations
> up in an article to save everyone else the excessive
> effort, but I got to thinking that *surely* this can't
> really be this hard.
>
> So, has anyone managed to do something like this in
> a simple and straightforward way that I may have
> overlooked?

Not really. Are you aware that there is an object graphics reverse-axis example included with IDL (EX_REVERSE_PLOT)? It was introduced with 5.4. At the time I tried it out and noticed various problems, in particular that the titles looked wrong. I raised this with Atle @ RSI Tech Support and he sent back a cool little GUI routine, which I have taken the liberty of attaching. I don't know if it handles every case though and it seems kind of fiddly.

So I have gone back to my original method of reversing object-graphics axes: keep the data range positive and use TICKFORMAT to make it *look* reversed. For example if I have an array "depth" representing positive distance below the ocean surface and I want to plot it against the Y axis, I use

```
z = - depth
xaxis = obj_new('IDLgrAxis', 1, RANGE=[min(z),max(z)] $
      , TITLE='Depth (m)', TICKFORMAT='mgh_tf_negative')
```

where MGH_TF_NEGATIVE is here

http://katipo.niwa.cri.nz/~hadfield/gust/software/idl/mgh_tf _negative.pro

and there's also a more general linear-scaling routine here

http://katipo.niwa.cri.nz/~hadfield/gust/software/idl/mgh_tf _linear.pro

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