Subject: Re: correct way to use INTERPOLATE function
Posted by David Fanning on Fri, 21 Sep 2007 18:42:52 GMT
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Ryan. writes:

> I want to plot two arrays of different sizes so I am trying to use
> INTERPOLATE on the smaller array to make it the same size as the large
> one. I can't seem to use the INTERPOLATE function correctly and there
> isn't very much documentation on how to generalize it's use. I need
> help in generalizing its use. All I get as a result is the first
> element repeated (the same result I would get if I used the REPLICATE
> function). I want to do this in the general case because I need to do
> it a few times. Here is a simpler version of what I am doing:
>
> smallarray = [10.3, 9.6, 9.2, 8.5, 7.7, 6.9, 5.8, 5.4, 4.7, 4.1]
> largearray = FINDGEN(1000)*0.5
>
> smsize = N_ELEMENTS(smallarray)
> lasize = N_ELEMENTS(largearray)
>
> interpped = INTERPOLATE(smallarray, smsize/(lasize-1)*FINDGEN(lasize))
>
> PLOT, interpped, largearray
>
> One feature of the small array is that it is decreasing throughout and
> has approximately 100 elements. The large array has several thousand
> elements. I believe there is an error in the equation I have in the
> second argument.

It's not clear to me exactly what you are hoping to do,
but it seems clear INTERPOLATE isn't the way to do it. :-)

I think something like this will work:

```
PLOT, Congrid(smallarray, N_Elements(largearray)), largearray
```

This will not change the values in smallarray that get plotted.
If you want to interpolate the values, set the INTERP keyword
to CONGRID.

Cheers,

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