
Subject: Re: INTERPOL

Posted by [Craig Markwardt](#) on Mon, 08 Oct 2001 20:15:47 GMT

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Hi Roland--

Sorry for the delay, I got preoccupied.

I guess what I was hoping for is some simplified example of why you think something is not working right. It doesn't actually have to be the original data, in fact it is better if it is **not**. Best if you can make a 20-element vector that shows the problem.

I can't see anything obviously wrong with your code. However I use INTERPOL() regularly inside of PLOTIMAGE and it rarely misses a beat. Have you tried SPL_INIT/SPL_INTERP? That has also always been a winner for me.

Craig

"Roland Bammer, Ph.D." <roland@s-word.stanford.edu> writes:

> Hi Craig and others,

>

> "in_vec" is a vector of length "ydim" taken from a column of an image.

> the content of this vector should be shifted "shift" and scaled "mag"

> (squeezed or magnified) and resampled on a regular grid ("new_vec").

> The first and last few elements of "in_vec" are usually mere noise.

> Problems occur at the edges of the array when warp_x(0) > 0 or

> warp_x(ydim-1) < ydim-1, ie. some elements have some unreasonable high

> values. I would understand if this problem arises in the "extrapolation

> zone" but these distortions extent into the area where gridpoints are

> available (from in_vec and warp_y); and the slightly (a few %) elevated

> signal intensity compared to the input is still an enigma.

> Any guesses? It occurs for all interpolation schemes (/SPLINE, ...)

> Mirroring the data around warp_x(0) and warp_x(ydim-1) helps but the

> intensity shift is still there...

>

> Roland.

>

>

>

> Craig Markwardt wrote:

>

>> Hi Roland,

>>

>> Can you fill us in a little on what this procedure should do, like

>> with an example of what you did, what was the result, and what you

```
>> were expecting?
>>
>> Craig
>>
>>
>> "Roland Bammer, Ph.D." <roland@s-word.stanford.edu> writes:
>>
>>> Hi all,
>>>
>>> I have encountered some problems (some data fluctuations at the edges)
>>> with the INTERPOL-Function:
>>> when warp_x(0) > 0 or warp(ydim-1) < ydim-1 in the code below.
>>> Moreover, it seems that the overall signal values are shifted towards
>>> higher values. Restricting the values of regrid to CEIL(warp_x(0))<=
>>> regrid <= FLOOR(warp(ydim-1)) (i.e. no extrapolation) did not help at all.
>>>
>>> Any suggestions?
>>>
>>> PRO regriding, in_vec, new_vec, ydim, mag, shift_y
>>> x0    = ydim/2.0 - 0.5
>>> regrid = FINDGEN(ydim)
>>> x1 = x0 + (regrid-x0)*mag
>>> warp_x = x1 + shift_y
>>> new_vec = INTERPOL(in_vec,warp_x,regrid,/SPLINE)
>>> END;
>>>
>>> Roland.
>>>
>>>
>>
>
```

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Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
