
Subject: Re: Mean preserving interpolation (conservative interpolation)

Posted by [DavidF\[1\]](#) on Tue, 16 Oct 2012 16:52:39 GMT

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Brigitte writes:

> When I interpolate `y=congrid(x,ny,/interp)` an array, the mean of the original array (x) is different from the mean of the interpolated array (y). Is there a function or keyword to preserve the mean?

The keyword you are looking for is `MINUS_ONE`:

```
IDL> x = (Findgen(100)+1)*4
IDL> print, Mean(x)
      202.000
IDL> print, mean(congrid(x, 200, /minus_one))
      202.000
IDL> print, mean(congrid(x, 5250, /minus_one))
      202.000
IDL> print, mean(congrid(x, 5250, /interp, /minus_one))
      202.000
IDL> print, mean(congrid(x, 367, /interp, /minus_one))
      202.000
```

Cheers,

David
