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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  $y = \text{congrid}(x, ny, /interp)$  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

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