Subject: Re: 2 arrays, average, missing data
Posted by Craig Markwardt on Thu, 08 Sep 2005 14:55:28 GMT
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"KJM" <kimberlite@gmail.com> writes:
> HI All,
> IDL newbie here, I would appreciate any help.   (Have been pouring over
> Gumley and Fanning books for a day now, can't get this simple
> calculation done.)
>
> I have 2 arrays.   Each array has float values and missing
> data(value=0).   I want to create a third array that has the average of
> the two arrays if there are two good values.   Otherwise, I want the
> third array to take the value of the array that has data.
>
>
> If my arrays are A and B, and the new array C, I know I can use:
>
> C = (A+B)/2
>
> to get the third array with averaged values.   The only problem, is
> that missing data values are averaged in with good values also.   (ie:
> 275 averaged w/ 0 -- when I want to just take the 275 value).

Here's something without WHERE's

  MISSING = 0.0
  C = (A+B)/((A NE MISSING) + (B NE MISSING))

You'll get NaN whereever both values are missing. This is easily
extendible to the case where you have N arrays with M values each.
Just arrange them into an MxN array,

  DATA = DBLARR(M,N)
  ... fill data values ...
  C = TOTAL(DATA,2)/TOTAL(DATA NE MISSING,2)

Craig

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