Subject: Re: Help with Histogram...
Posted by MA on Wed, 28 Sep 2005 18:54:59 GMT
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Hello Peter,
I've been playing around with your second suggestion for a while. There are a couple of added difficulties with my data.
For one, the actual height levels (corresponding to 'height_level' in your example) vary from profile to profile. The other problem is that the arrays containing the cloud bases and tops are not always full (i.e. there are not always 8 stacked clouds). Most of the time, only the first 1-3 places in the array actually contain data, the rest is set to a default value. I have another array (length=number of profiles) that holds the number of clouds in each profile.
On the first problem:
I have to alter the line from your example
  base_idx = ceil(interpol(x, height_level, base))
; in dimensions: [10,8]=ceil(interpol([60],[60],[10,8]))
to dimensions
[10,8]=ceil(interpol([60,10],[60,10],[10,8]))
x and height_level are now 60x10 arrays, to account for the changing height levels in different profiles.
BUT, the resulting array from this line (base_idx, top_idx) doesn't give me the right answer.
I think it is because it probably does the interpolation now in both dimensions. Is there a way to tell Interpol to only interpolate in the one direction (between height levels, but not between profiles)? I haven't found such an option on the help, but maybe I overlooked it.
Otherwise I'm back to looping over the profiles:
For i=0,num_profiles-1 do $
    base_idx[*,i] = ceil(interpol(x[*,i], height_level[*,i], base[i,*]))

The second problem (fill values) is probably not as bad.
I'll look a bit into Ben's suggestion, see if that one does do better with the varying profiles.
Thanks again.