Subject: Re: dimensional headache
Posted by Andrew[2] on Wed, 06 Apr 2005 07:01:59 GMT
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Hi Margrethe,

I am not sure what some of the things you have in your code do (aka calls to ther functions), nor do I know how easily you might be able to modify them, but I had a crack at the code and made some reasonably hefty assumptions. Some of this may be completly useless to you. The distance array d works a treat though and lets you get away from the whole sqrt, squared buisness. As for the rest of it, I am not sure since I dont know if you are heavily restricted in your array sizes (I also am not sure what are scalars and arrays in a couple of cases). I also noticed in you second attempt at the code that their are still what appear to be loop markers k and l. So i am not entirely sure what will be applicable here. I would imagine that the [indx] markers can be removed if I have stuck them in the wrong places for the things that are scalars rather than arrays. I hope this helps in some small way.

```
;get the distance array first
d=SHIFT(DIST(160),xmod,ymod)

;don't take the wings of the psf into account
indx = where (d lt  (3. * (fwhm/2.35) ) ,ct)

 ;only do the calculations where the above criteria has been met
IF (ct NE 0) THEN BEGIN
 ;assumes here that vel_p,vel_sys, and v_rad are all 160x160 arrays
              ;if vel_sys isnt then just remove the [indx] part
 vel_p[indx] = ( vel_sys[indx] + v_rad[indx] )

 ;I assume the original psf returned a scalar value at the location i,j
 ;psf = gaussfunc(st_dev,xgrid(i),ygrid(j),xmod,ymod )

 ;not sure what do do here as I dont really know what psf returns
 ;can you return it as a 160x160 array if needed. yes?
 ;i assumed here that the xgrid and ygrid parameters can
 ;be merged and passed as the complete array size (im guessing)
 psf[indx] = gaussfunc(st_dev,FINDGEN(160,160),xmod,ymod )

     lineprof[indx] = lineprof[indx] + total ( psf[indx] * image[indx]
* $
          exp( (vel - vel_p[indx])^2./(-2.*v2)) )
ENDIF
```

Cheers
Andrew