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Subject: Re: Flow3 procedure and WHERE  
Posted by [adharac](#) on Mon, 24 May 2004 15:44:45 GMT  
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Hello Dr.Fanning, Thanks for effort in trying to understand my program!However, let me clarify some points:

- Yes, my velocity vectors are three dimensional. Meaning that  $V_x$  is the component of the velocity in the x-direction,  $V_y$  is the component of the velocity in the y-direction, and  $V_z$  is the component of the velocity in the z-direction. I expect IDL to plot the resultant of these three components starting at the coordinates (sx,sy,sz).

- I think I will get them to have the same size because  $V_x, V_y, V_z$  have a value different to zero, all at the same time and at the same location. So probably FLOW3 will like it!!

- I also have the exact location at which the vector starts, therefore I rather use it as input in FLOW3. My problem has been to \*extract\* these  $S_x, S_y, S_z$  coordinates at which  $V_x, V_y, V_z$  are different from zero. These location vectors will also have the same size as the velocity vectors.

-From the 32400 data points that I have, only 521 have data different from zero. The velocity data is very small, and as you suggested I am already using a factor to increase those values. However, this factor can not be greater than 20 because:

```
% Program caused arithmetic error: Floating divide by 0  
% Program caused arithmetic error: Floating overflow  
% Program caused arithmetic error: Floating illegal operand
```

- Do my comments clarify my ideas to you?  
- Should I use instead: IF  $v_x, v_y, v_z \neq 0$  then write  $s_x, s_y, s_z$  into the respective arrays. How can I do this?

I tried to do it as well in 2D as you said. However, I have a simple question because I am having an error according to the command arguments, due to the size of U and V using VELOVECT.

I am using U as one dimensional vector with  $V_x$ , and V as one dimensional vector with  $V_y$ . What does it mean that it "must be a two-dimensional array".??

```
openr,q,'VOa.dat',/Get_Lun  
;A=fltarr(6,10*5L)
```

```
A=fltarr(6,360*90L)
readF,q,A
Free_Lun,q
```

; The velocity in 2D will be plotted on the plane x-z, however, there is data for Vy and y, but will be ingored.

```
Vx=fltarr(360,90)
Vz=fltarr(360,90)
```

```
For i = 0, 32399L Do Begin
```

```
;(0) first column of the array is z (0<z<90)
;(1) second column of the array is y (constant)
;(2) third column of the array is x (0<x<360)
;(3) fourth column of the array is Vz
;(4) fifth column of the array is Vy
;(5) sixth column of the array is Vx
```

```
Vx(A(2,i)-1,A(0,i)-1) = A(5,i)
Vz(A(2,i)-1,A(0,i)-1) = A(3,i)
```

```
Endfor
```

```
Vxx=WHERE(Vx NE 0,count5)
Vzz=WHERE(Vz NE 0,count6)
```

```
Velovect,Vxx,Vzz
```

```
end
```

Thank You very much Dr.Fanning, I hope to hear from you soon,

Adhara

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