Subject: Re: Ternary Plot in IDL?
Posted by JP on Tue, 09 Apr 2013 13:27:20 GMT
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Oh, cool, will have a look.
I had been trying myself, after finding that it's really a simple reprojection of a 2d space.
Came up with the very rudimentary procedure below (before reading your reply). Doesnt have much functionality but it works).

JP

```
pro TernaryPlot, x, y, z, $
   _EXTRA=extra

   ; write warnings for x, y not being within 0-1 and adding to more than 1
   ; first check if z exists or not
   n_x = n_elements(x)
   n_y = n_elements(y)
   n_z = n_elements(z)

   if n_z eq 0 then begin
     print, 'z not present, assumed to be = 1-x-y'
     z=1-x-y
     n_z = n_elements(z)
   endif

   ; check if x, y, z, all same # of elements
   if (n_x ne n_y) or (n_x ne n_z) or (n_x ne n_z) then $
       Message, 'x, y, z must have same number of elements'

   ; check if all sum to one
   tot = x+y+z
   if total(tot gt 1) ge 1 then $
     print, 'warning: at least one element adds to >1 '
   if total(tot lt 1) ge 1 then $
     print, 'warning: at least one element adds to <1 '


   x_new = y + z/2
   y_new =  SQRT(3)/2*z
   vertices_x= [0.0, 0.5, 1, 0]
   vertices_y= [0.0, SQRT(3)/2, 0, 0]

   cgPlot, x_new, y_new, xRange=[0,1], yRange=[0, SQRT(3)/2], yStyle=1, _EXTRA=extra
   cgPlot, vertices_x, vertices_y, psym=-3, /overplot

end
```

On Tuesday, 9 April 2013 21:56:15 UTC+10, David Fanning wrote:
> David Fanning writes:
>
>
>
>> Fernando Santoro has a Ternary Diagram program, written in function
>
>> graphics, in the IDL code library on the ExelisVis web page. He also
>
>> wrote the Taylor Diagram code that I cribbed for cgTaylorDiagram. It
>
>> took me most of a morning to do it. I won't take you too much longer, I
>
>> don't think, to do the same thing for the Ternary Diagram. :-)
>
>
>
> Just looking at that code, not only is it going to take you just a
>
> couple of hours to convert to Coyote Graphics, but it is also going to
>
> be easy to make improvements! For example, I would start by centering
>
> the diagram in the window, adding keywords to allow for different
>
> symbols of different sizes, etc. It is pretty bare bones in its current
>
> configuration.
>
>
>
> Cheers,
>
>
>
> David
>
>
>
>
>
>
> --
>
> David Fanning, Ph.D.
>

> Fanning Software Consulting, Inc.
>
> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
>
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")
