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Subject: Re: vectors on maps

Posted by [wmc](#) on Wed, 25 Nov 1998 08:00:00 GMT

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Varavut Limpasuvan <var@atmos.washington.edu> writes:

> Is it possible to overlay vectors (say wind vectors) on a stereographic  
> (or any other type) projection map? I dont think "velovect" works for  
> this situation. Help.

Drawing arrows (vectors) is always a pain... for polar stereos, the transformation is fairly easy though: if (fx,fy) are your vectors in (lo,la) directions, then

$fx1 = fx \cdot \cosd(lo) + fy \cdot \sind(la)$

$fy1 = -fx \cdot \sind(lo) + fy \cdot \cosd(la)$

are the rotated vectors. Remember you need to use `convert_coord` to draw everything in device space or you'll regret it.

For a general map projection, the transformation is harder. I would guess that you would have to define a scale length for your vectors, definite their ends in lat-lon coords, and use `convert_coord` to "rotate" them.

- William

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