
Subject: Re: Map projections

Posted by [Liam E. Gumley](#) on Mon, 12 Nov 2001 16:16:11 GMT

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James Kuyper wrote:

> Is there any way to get at the coordinate conversion function for the
> currently active map projection? I'm talking about a function that takes
> a physical position in latitude and longitude coordinates, and converts
> it into an image position using either data, device, or normal
> coordinates. It doesn't matter which; once the position is in any one of
> those forms, I can get the others by using CONVERT_COORD. Such functions
> have to exist in order for IDL to perform mapping, but they don't seem
> to be publically exposed. I'd also like to have access to the inverse
> function, to get a lat/lon corresponding to an image position.

James,

When a map projection is active, longitude and latitude correspond to x/y data coordinates. Therefore CONVERT_COORD will allow you to obtain the device or normal coordinates for a given lon/lat. For example:

```
window, /free
map_set, 45, -90, scale=20e6, /usa
lon = -89.6
lat = 43.5
print, convert_coord(lon, lat, /data, /to_device)
      326.465  217.622  0.000000
print, convert_coord(lon, lat, /data, /to_normal)
      0.510102  0.425044  0.000000
```

Cheers,

Liam.

Practical IDL Programming

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