
Subject: Q: /satellite projection in IDL maps
Posted by [moersch](#) on Sat, 06 Aug 1994 08:53:17 GMT
[View Forum Message](#) <> [Reply to Message](#)

Greetings -

I've recently been playing around with the satellite map projection in IDL, and I've noticed that the parameters you have to specify seem very awkward. You supply MAP_SET with the satellite's altitude and sub-satellite point on the ground, along with two angles for the direction of viewing - one an azimuthal angle, and the other a cone angle, measured off of nadir (looking straight down). That all makes sense to me. But you also need to specify a set of four latitude/longitude pairs for the top, bottom, and sides of the map that will be produced. That really seems odd - it's difficult to pick those limits and not have some points end up over the horizon of the planet, for example.

It seems to me that a much more intuitive way of determining the limits of the image/map would be to specify a field of view of the camera in degrees. Let the computer go off and figure out what that translates into in lat/lon coordinates, I say! Has anybody by chance written an IDL program that will do this?

To give a little background, I am working with a mosaic of images of Jupiter from last month's comet crash. We have reprojected several images into a cylindrical projection and mosaicked them into a full map of Jupiter's southern hemisphere. What I'd like to do is be able to use IDL's mapping routines to project our mosaic so that we could display Jupiter as it would appear from any arbitrary point in space. Ideally, I'd want to have a program that takes the subsatellite point, the satellite altitude, the camera direction, and the camera field of view, and produce an image of Jupiter as it would appear from that vantage point.

Any pointers to potentially useful programs out there would be greatly appreciated!

Thanks for your time.

Jeff Moersch
Astronomy and Space Sciences
Cornell University
moersch@astrosun.tn.cornell.edu

--
