Subject: Associating GeoTiFF tags with basic Mercator projection parameters?
Posted by BLesht on Tue, 04 Jan 2011 05:07:26 GMT
View Forum Message <> Reply to Message

I've been through the GeoTiFF threads here and, as often advised, have tried to make sense of the GeoTiFF standard (http://remotesensing.org/geotiff/spec/geotiff6.html#6.3.3) without success. I'm hoping that someone with knowledge of using IDL to write GeoTiff files can give me some help with the following problem.

I have a set of images that were created by transforming satellite data onto a basic (single standard parallel at the equator) Mercator projection. The projected images were created using IDL with a minimal set of parameters; I know the size of the image (pixels, lines), its geographic limits, the central meridian, and that it is isotropic. Here is a header dump of the mapped files (which are hdf).

```
Sample:Projection Category = "IDL" ;
        Sample:Projection Name = "Mercator" ;
        Sample:Limit = 38.8744010925293, -92.41079711914062,
50.60269927978516, -75.86920166015625 ;
        Sample:Projection ID = 9 ;
        Sample:Latitude Center = 0. ;
        Sample:Longitude Center = -84.13999938964844 ;
        Sample:Rotation = 0. ;
        Sample:Position = 0., 0., 1., 1. ;
        Sample:Isotropic = 1 ;
        Sample:Scale = 0. ;
        Sample:Central_Azimuth = 0. ;
```

I do some manipulation of these files in my code and need to create output mapped images of an extracted region in the form of GeoTiFF files that can be read by ArcMap. The problem is that I seem to unable to find the correct set of GeoTiFF tags to accomplish this. For example:

```
g_tags = { $
        ModelPixelScaleTag: [0.016153906d, 0.011453418d, 0d], $
        ModelTiepointTag:   [0, 0, 0, -84.813, 46.580, 0.], $
        GTModeTypeGeoKey: 1,             $ ; Projected
        GTRasterTypeGeoKey: 1,           $ ; Pixel represents
area
        GeographicTypeGeoKey: 4326,      $ ; WGS84
        GeogLinearUnitsGeoKey: 9001,     $ ; meters
        GeogAngularUnitsGeoKey: 9102,    $ ; angular degree
        ProjCoordTransGeoKey: 7,         $ ; Mercator
        ProjNatOriginLongGeoKey: -84.13999d,   $
        ProjNatOriginLatGeoKey: 0.0      $
```

```
        }
WRITE_TIFF, tif_name, new_comp_image, /FLOAT, GEOTIFF=g_tags
```

Produces files that "lack spatial reference data" when read by ArcMap. I'd sure appreciate some guidance - maybe there is a better way to accomplish this?

Thanks.
