
Subject: help with reading unsigned 16-bit integers
Posted by [teich](#) on Sun, 09 Dec 2007 07:28:26 GMT
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Hi,

I am reading a HDF file and one of the SDS is an unsigned 16-bit integer. According to documentation, the bits have certain meanings. The bits go from 1 to 16. For example, bits 1-3 represent feature type (0- invalid, 1-'clean air', 2-'cloud', ...). This is data from NASA's Calipso Vertical Feature Mask (in case your wondering).

I have no idea what's going on when I read the SDS. For example, I get the following output:

```
> HDF_SD_GETDATA,sds_id,Feature_Classification_Flags
> FEATURE_CLASSIFICATION_FLAGS  UINT  = Array[5515, 3744]
```

```
IDL> print,FEATURE_CLASSIFICATION_FLAGS(5500:5514,3743)
      8221  8221  8221  8221  8221 16413 16413 16413
16413 16413 16413 16413
      16413 16413 16413
```

Could anyone tell me what I am looking at here? Where are bits 1-3, etc? Do I need to do some conversion? I tried some of the stuff at:

http://www.dfanning.com/tips/unsigned_integers.html,

but none of that seemed to get me anywhere.

Thanks,

Howard
