Subject: Re: Reading individual bits of MODIS BRDF quality files Posted by Wout De Nolf on Fri, 18 Sep 2009 12:05:11 GMT

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On Fri, 18 Sep 2009 02:54:55 -0700 (PDT), emitchard <emitchard@googlemail.com> wrote:

- > I am running IDL 7.0.6 on Windows vista (with ENVI 4.6). I am using
- > MODIS BRDF corrected 500 m data (MCD43A4). I have sucessfully written
- > a program to open the HDF files and produce the output vegetation
- > indices I'm interested in. However, I need to filter out cloud-
- > contaminated pixels, and am having problem reading the bit-packed
- > quality control file (MCD43A2).

>

- > I have written a program to extract the layer I'm interested in from
- > the HDF file and save it as a 32-bit unsigned integer. However, I
- > really need to extract the raw values of the first 12 bits of this
- > number (the values of the remaining fields do not matter to me). I
- > started writing a program to list all the numbers (from 0-4294967295)
- > that result from my required bit combination of these first 12 bits,
- > but that approach is not going to work as there are several million
- > 'allowable' numbers.

>

- > Is there a function in IDL that can read individual bits, or any other
- > clever way to produce an array of 1s and 0s from a 32-bit integer?

>

> Many thanks for your help,

>

> Edward Mitchard

Maybe I don't understand what you want, but to extract the first 12bits from a 32bit integer:

a=54564L b=a and 'FFF'xl