
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@gmail.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'x1
