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Subject: Re: MOD43B3 Col.4 Processing. unexpected error message. why?  
Posted by [James Kuyper](#) on Wed, 11 Jul 2007 18:59:45 GMT  
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devin.white@gmail.com wrote:

> This is just an initial stab at what might be the problem, but I  
> noticed that you're defining your albedo arrays as floating point:  
>  
>   albedo\_black = fltarr(1200, 1200)  
>   albedo\_white = fltarr(1200, 1200)  
>  
> MOD43B3 albedo is stored as integer, which is half the size.

As a result, we have:

```
IDL> HELP,albedo
ALBEDO      INT      = Array[2, 10, 1200, 1200]
IDL> help,albedo_black
ALBEDO_BLACK  FLOAT   = Array[1200, 1200]
```

However, an automatic conversion between INT and FLOAT occurs on the following line:

```
albedo_black[*,*]=albedo[0,9,*,*]
```

> Your  
> data are most likely getting written into the file, but ENVI is  
> expecting them to take up more room.

The INT array 'albedo' is never passed to ENVI. Only the albedo\_black and albedo\_white arrays are passed to ENVI\_WRITE\_ENVI\_FILE, and those are both float arrays. In any event, ENVI\_WRITE\_ENVI\_FILE is supposed to convert it's input array into whichever data type is specified by the OUT\_DT parameter. In this case, that parameter is set to 4, so no conversion is needed.

Whatever the problem is, that can't be the cause..

...  
> retrieve). You don't get floating point output unless you take the  
> four-dimensional albedo array and apply the necessary scale and offset  
> factors stored in the SD. Just a thought.

The scale\_factor and add\_offset do need to be applied to calculate the correct albedo, as indicated by the filespec:

> Data conversions:

```
> file_data = (Albedo / scale_factor) + add_offset  
> Albedo    = (file_data - add_offset) * scale_factor
```

These values may be read from the file using code like the following:

```
idx_scale = HDF_SD_AttrFind(sdsID_albedo, 'scale_factor')  
HDF_SD_AttrInfo, sdsID_albedo, idx_scale, DATA=scale_factor  
idx_offset = HDF_SD_AttrFind(sdsID_albedo, 'add_offset')  
HDF_SD_AttrInfo, sdsID_albedo, idx_offset, DATA=add_offset
```

However, the problems he's been having don't seem to be related to the values stored in his variables. The message said that the problem was that something had a dimension of 0. Whether or not he applied the scale factor and offset shouldn't have any affect on that problem.

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