Subject: Moving Average on Hyperspectral dataset
Posted by rafaloos on Mon, 26 Mar 2007 23:03:28 GMT
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Hi, all ...
We are trying to do a moving average on our dataset. The dataset comes from a Hyperspectral sensor and has 296 samples, 2000 lines and 492 bands.
We need to go through each pixel and do a moving average on the spectral bands. So in the end we will have a dataset with the same dimensions as the original but with smooth spectra. And because of the moving average kernel size, we will have some empty bands at the beginning and at the end.

Here is the code that we are using now ...

```
>>>>  IMAGE = (296, 2000, 492)

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Step = FIX(Kernel / 2)

FOR samples = 0 , 295 DO BEGIN
    FOR lines = 0, 1999 DO BEGIN
        FOR bands = Step, 491 - Step DO BEGIN
            ARR_TEMP = MEAN(IMAGE[samples, lines,bands-Step:bands
+step])
          IMAGE[samples, lines, bands] = ARR_TEMP
                IMAGE[samples, lines, 0:step-1] = 0
                IMAGE[samples, lines, bands-(Step):bands-1] =
0
        ENDFOR
    ENDFOR
ENDFOR

---------------------------------------
```

With the loops the code takes about 3 hours ... Is there a way to speed it up ?

Thank you