Subject: find max in 3D array -- slow
Posted by Timothy W. Hilton on Sat, 10 Apr 2010 16:03:33 GMT
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Hello IDL users,

I have a 1200x1200x2900 array of floats. The dimensions correspond to latitude x longitude x time. I need to find the maxium at each location -- that is, I need the 1200x1200 array containing the max along the 3rd dimsion. IDL takes almost 3 minutes to do this on my system. This seemed slow. I compared it with Matlab, which took ten seconds. Is there a better way to search for the maxima using IDL?

The demo code I used to compare IDL and Matlab is below (with output).

I'm wondering if I ought to switch to Matlab. I just spent a couple of days writing IDL code to read my data, so I'd rather not.

Many thanks,
Tim

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scratch.pro:

```
foo = randomu(0, 1200, 1200, 2920)
PRINT, systime()
foo_max = max(foo, DIMENSION = 3)
PRINT, systime()
END
```

```
IDL> .run scratch
% Compiled module: $MAIN$.
Sat Apr 10 10:44:44 2010
Sat Apr 10 10:47:36 2010
IDL>
```

========
scratch.m:

```
foo = rand(1200,1200,2920);
```

```
fprintf('%s\n', datestr(now()));
foo_max = max(foo, [], 3);
fprintf('%s\n', datestr(now()));

>>  scratch
10-Apr-2010 10:42:45
10-Apr-2010 10:42:55
```