Subject: Re: correlation of single pixels
Posted by Klemen on Mon, 12 Nov 2012 18:40:21 GMT
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Hi Max,

no x and y are in this case just the regression variables. See:
https://groups.google.com/forum/?fromgroups=#!topic/comp.lan g.idl-pvwave/F2E8cLePGsQ

Computing correlation using IDL function CORRELATE is ok, if you have to do it once. But here you have to do it within each area of interest a couple of times (considering set of possible offsets in x and y direction) so you have to use 4 FOR loops which will run slow!

Thus you should ask yourself first, how large is the data set you want to process. If you are sure that your offset are not larger than 2 pixels, then you might go for the slow version. That would be something like:

```
results_corr = make_array(...
results_offx = make_array(...
results_offy = make_array(...
FOR xall=xstart,xend do begin
 FOR yall=ystart,yend do begin
  search_area = data[xall-search_size:yall+search_size]
  template = data[xall-template_size:yall+template_size]
   FOR xoff=-search_size:search_size do begin
    FOR yoff=-search_size:search_size do begin
     data = (shift(search_area, xoff, yoff))[right indeice]
  corr = correlate(data[*], template[*])
  if corr gt results_corr[xall, yall] then begin
   results_corr[xall, yall] = corr
   results_offx[xall, yall] = xoff
   results_offy[xall, yall] = yoff
  endif
 endfor
   endfor
 endfor
endfor
```