
Subject: image matching / align images

Posted by [Klemen](#) on Thu, 19 Jul 2012 07:37:43 GMT

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Hi, I was wondering if somebody has any experience with aligning images (image matching) in IDL. I have found an old thread discussing this topic:

<https://groups.google.com/forum/?fromgroups#!topic/comp.lang.idl-pvwave/gJOaD7x7k-g>

I have managed to run the code of Hongjie Xie (they wrote a paper "An IDL/ENVI implementation of the FFT-based algorithm for automatic image registration" in Computers and Geosciences). It works fine. But I would like to have more than just a global shift and rotation. I am interested into local distortions. At the moment I am working on the comparison of geostationary satellite data of clouds.

The second code in the mentioned post is written by T. Metcalf (SOHO). But I cannot get it running. ARANGE is probably an undefined function that I cannot find at SOHO web pages - see below:

```
IDL> inew=auto_align_images(s1,s2,[3.,0.,1.,0.],[0.,1.,0.,0.],ppp ,qqq)
% AUTO_ALIGN_IMAGES: Using the Powell algorithm.
```

Initial guess:

```
% Variable is undefined: ARANGE.
```

```
% Execution halted at: PQ2RSS          74 C:\_code\Lib_downloaded\SOHO\pq2rss.pro
```

```
%          AUTO_ALIGN_IMAGES 524
```

```
C:\_code\Lib_downloaded\SOHO\auto_align_images.pro
```

```
%          $MAIN$
```

```
IDL>
```

So I leave you with two questions:

- 1) Does anybody have experience with this AUTO_ALIGN_IMAGES code and if yes, what am I doing wrong?
- 2) Is there an alternative code that wraps one image into another but not linearly, with an order of at least 2 (3 or four would be better)?

Cheers, Klemen
