Subject: Re: mosaic routine?
Posted by wlandsman on Fri, 26 Dec 2008 20:12:53 GMT
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On Dec 26, 11:01 am, Dick French <rfre...@wellesley.edu> wrote:
> Hi, folks -
> I'm trying to create an accurate mosaic composite image from about 45
> tiles. In the simplest instance, no rotations or reprojections are
> required - just sliding rectilinearly.

I presume these are astronomical images == can you get an astrometric solution for each individual tile? This would automatically give the shift between individual tiles. If I had astrometric information in each individual FITS header, then I would probably create an empty big image with a FITS header, and use hastrom.pro (http://idlastro.gsfc.nasa.gov/ftp/pro/astrom/hastrom.pro) to map each individual tile into the big image. HASTROM uses POLY_2d internally which gives the option of using bilinear or cubic interpolation for subpixel shifts.

I'd be very surprised if you couldn't get an astrometric solution for each tile, given the availability of huge astrometric reference catalogs like USNO, and automatic plate solution software like astrometry.net.

But if for some reason you need to correlate images to get relative shifts, you might look at some very old IDL mosaic software written by Frank Varosi (http://adsabs.harvard.edu/abs/1993ASPC...52..393V) for small infrared arrays, which is still available at http://idlastro.gsfc.nasa.gov/ftp/contrib/varosi/

Finally, you might look at the SIMPLE software (http://www.aoc.nrao.edu/~whwang/idl/SIMPLE/MOIRCS/Doc/index. html) which is designed to create a mosaic of dithered optical images, but does much more than you probably need. --Wayne