
Subject: Re: change pixel scale

Posted by [Russell Ryan](#) on Sun, 27 May 2012 15:03:15 GMT

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On May 26, 7:46 am, spasoklampa...@yahoo.com wrote:

> Hi

>

> I have some fits files (astronomy images) that have a different
> pixel scale. How is it possible to bring them on the same pixel scale?
> The given routine of degrade is not suitable, since it degrades the
> image resolution by a factor of two, which is not my case.

>

> Thanks a lot.

So...

There are several ways to skin this cat, and they depend on how careful you want to be. Before we get into those ways, you need to answer a few things about your images...

(1) Do they both have WCS in the headers that you trust?

(2) Are they astrometrically aligned already, and you just want to re-pixelate?

If the answer to (1) is "no," then we need to fix that first.

Hopefully, you know *roughly* where your field is and can just grab a bunch of stars either from the DSS or SDSS to get the precise WCS mapped out. If not, then you need to go outside of IDL get the job done.

Then you can use `hastrom.pro` (in the IDL astro library) to register the two images. This does only a bilinear (I think?) interpolation --- which may not be good enough for you. If you have a weight map (or error image), then you need to process that as well --- but remember you'll need to work with variances!!

If you don't like bilinear, then the only way I know how to do this is to go outside of IDL and use SCAMP and SWarp to get the job done.

Good luck!

Russell
