
Subject: Re: Zoom out of astronomical image preserving header info
Posted by [mperrin+news](#) on Fri, 18 Feb 2005 21:34:21 GMT

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burkina <stebia@inwind.it> wrote:

- > The problem with hrebin (and hcongrid) is that they don't zoom the
- > image out as I need (like atv for example). They will produce an image
- > with that number of pixels, so that if the zoom factor is 2, an
- > original image of, say, 300x300, will become 600x600. This means a lot
- > of time in processing the image when you need a very large zoom factor
- > (as in my case) and enormous image files. That's not what I need. I
- > actually need a constant image size, but with the original image
- > shrunk to the desired dimension.
- > In practice, I need a functionality completely equivalent to the ATV
- > zoom, together with the possibility to re-center the final image where
- > I want. I need space outside the image with the correct RA and DEC
- > coordinates. ATV does it, but it can't do other things I need. That's
- > why I can't use it directly.

In that case, may I suggest that you read through the atv source and copy the algorithms from there? ATV is actually fairly well written and I think it's not too difficult to pull out the relevant sections.

In particular, look at `atv_getdisplay` for the code that actually resizes the array using `congrid` and embeds it into a larger fixed-size array initialized to all zeros. You may have some more complicated manipulations needed to get the astrometry header to match correctly.

What you really want is to resize the image to a smaller size and then embed it in a larger array, I think. The first part is easy with `HCONGRID`. The second needs the inverse of `HEXTRACT`, which doesn't seem to exist yet. (`HEMBED`?) Maybe if you end up writing such a thing, you could consider contributing it to the library!

- Marshall
