Subject: Re: ratio imaging
Posted by Craig Markwardt on Fri, 08 Mar 2002 17:26:09 GMT
View Forum Message <> Reply to Message

Dan Larson <drl16@cornell.edu> writes:
> I am trying to do simple ratiometric
> imaging with IDL. Of course, since
> there is some pixelation noise, the
> ratio is not very robust. I have
> experimented with a number of
> different filters (median, Gaussian
> deconvolution, smooth) to try and
> remove some of this instability.
> Is there a filtering technique which
> is minimally perturbative that will
> remove some numerical artificats
> without changing the boundaries of
> objects?

Dan, you should be filtering the two images, *before* computing the ratio, right? I would have said that goes without saying, but now I am saying it. [The reason of course is that the ratio does not have a nice compact statistical distribution, so averaging is less robust.]

Craig

--
---------- ----------
Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
---------- ----------

Subject: Re: ratio imaging
Posted by gerhard.holst on Tue, 12 Mar 2002 08:28:03 GMT
View Forum Message <> Reply to Message

Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in message news:<on1yev3r9q.fsf@cow.physics.wisc.edu>...
> Dan Larson <drl16@cornell.edu> writes:
>> I am trying to do simple ratiometric
>> imaging with IDL. Of course, since
>> there is some pixelation noise, the
>> ratio is not very robust. I have
>> experimented with a number of
>> different filters (median, Gaussian
>> deconvolution, smooth) to try and

>> remove some of this instability.
>> Is there a filtering technique which
>> is minimally perturbative that will
>> remove some numerical artificats
>> without changing the boundaries of
>> objects?
>
> Dan, you should be filtering the two images, *before* computing the
> ratio, right? I would have said that goes without saying, but now I
> am saying it. [The reason of course is that the ratio does not have
> a nice compact statistical distribution, so averaging is less
> robust.]
>
> Craig

Dan,
if your are looking for more edge preserving filters you might
search for topics like "Savitzky-Golay" and "LOESS", both are
filters that might consume a little more time in calculation
(especially the LOESS I have found on the web, if you are interested
I can look for the link), but they do a good job in smoothing
while edge keeping, much better than boxcar, median etc.

Gerhard