Subject: Re: RADON: user-specified angular range possible?
Posted by Chris[1] on Thu, 03 Jun 2004 16:02:36 GMT
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"Timm Weitkamp" <not@this.address> wrote in message
news:Pine.LNX.4.44.0406031123030.1182-100000@localhost.local domain...
> To whoever may have used IDL's RADON function before:
>
> I am using the (forward) Radon transform to detect the orientation angle
> of features in radiographs. Since I know the approximate value of the
> angle beforehand, I need the transform only in a very limited range of
> angles. Calculating the entire range [0, pi], as RADON does by default, is
> a mere waste of time.
>
> Hence my question: Does the RADON function allow the user to specify any
> other angular range than [0, pi]? From the documentation and a futile
> attempt using the THETA keyword, I think it doesn't. But I sure would
> appreciate if someone could tell me that I'm wrong.
>

The theta keyword should work - I used it a couple of years ago quite a lot
and don't remember any quirks. Are you setting theta to the of angles you
want to use before calling radon, and making sure that the ntheta keyword is
not set?

Chris

Subject: Re: RADON: user-specified angular range possible?
Posted by R.G. Stockwell on Thu, 03 Jun 2004 20:39:07 GMT
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"Timm Weitkamp" <not@this.address> wrote in message
news:Pine.LNX.4.44.0406031123030.1182-100000@localhost.local domain...
> To whoever may have used IDL's RADON function before:
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> other angular range than [0, pi]? From the documentation and a futile
> attempt using the THETA keyword, I think it doesn't. But I sure would
> appreciate if someone could tell me that I'm wrong.
>
> Thanks

> Timm
>
> --
> Timm Weitkamp <http://people.web.psi.ch/weitkamp>
>

I haven't used the IDL radon function, but I wrote my own radon function (a long long time ago) that could easily be modified to restrict the angles (it is currently written to do a slope of -1 to 1).

I can send it to you if you want to take a look, it is a pretty short function.

-bob

Subject: Re: RADON: user-specified angular range possible?
Posted by Timm Weitkamp on Fri, 04 Jun 2004 08:41:03 GMT
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Thanks for replying, Chris and Bob.

Chris wrote:

> The theta keyword should work - I used it a couple of years ago quite a
> lot and don't remember any quirks. Are you setting theta to the of
> angles you want to use before calling radon, and making sure that the
> ntheta keyword is not set?

And actually, now it works for me too. What on earth did I do before? Maybe this:

```
IDL> r = RADON(img, THETA = !PI * 0.01 * FINDGEN(10)
% RADON: Expression must be named variable in this context: <FLOAT
      Array[4]>.
% Execution halted at:  $MAIN$
```

And when using a named variable, it actually works. Now why would you require a named variable for an input parameter? Beats me.

I admit that careful analysis of the on-line help should have got me on the right way. There it says, "THETA: For the forward transform, set this keyword to a named variable containing a vector of angular (q) coordinates to use for the transform. [...]"

Bob, I don't think I'll need to look at your code anymore. I can also throw mine away, which I wrote yesterday (but that was basically only a FOR loop with calls to ROT and TOTAL inside). Sorry for bothering.

Cheers,
Timm

--
Timm Weitkamp <http://people.web.psi.ch/weitkamp>