Subject: Re: RADON/RIENMANN TRANSFORMATION
Posted by Timm Weitkamp on Mon, 21 Jun 2004 17:05:52 GMT
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Max:

> -> is it correct to say :
> -> the sinogram will be 128 images of 128*360 matrix

Yes.

> - > From the discussion the Theta should be an array of 360 elements
,(one
> element per angle)

Yes. If the angles are equidistant with 1 degree spacing, then you might
set

```
IDL> theta = FINDGEN(360) * !DTOR
```

> -> For every Theta there should be an assosiated RHO , which means it
should
> also be an array of 360 elements.

No! RHO is the spatial coordinate and is therefore, in your case, a vector
of 128 elements. For example:

```
IDL> rho = FINDGEN(128) - (127 / 2.0)
```

For the backprojection, you can then call RADON with the previously
defined variables "theta" and "rho" and the sinogram data. For example:

```
IDL> rec = RADON(/BACKPROJECT, sinogram $
          , THETA=theta, RHO=rho, NX=128, NY=128).
```

(where "sinogram" should be the array containing your sinogram [which
you will probably have to filter before]).

Good luck
Timm

On 19.06.04 at 16:47, 555777555 wrote:

> Thanks for everyones answers ans suggestions ,i appeciate it very much
> 1. Assuming the data is aquired in 128*128 matrix , over 360 degrees at 1
> image per angle
> (for simplicity)
> -> is it correct to say :

> -> the sinogram will be 128 images of 128*360 matrix
> - > From the discussion the Theta should be an array of 360 elements ,(one
> element per angle)
> -> For every Theta there should be an assosiated RHO , which means it should
> also be an array of 360 elements.
>
> I have tried using the above but IDL respond that the dimentions do not
> agree
> ? What is the correct way / Where am i wrong
> Max

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