Subject: Need: general-purpose tomographic reconstruction routine
Posted by Fred Knight on Tue, 06 Jan 1998 08:00:00 GMT
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I'm looking for an IDL routine to do a
tomographic reconstruction of range-resolved radar data. I'm wondering
if anyone has, or knows of, a general-purpose utility to back project,
without or with filtering, or to do Radon transform. I'd like something
like this example for unfiltered back projection---but with options for
the type of transform.

```
na = 18                ; # of angles
angles=findgen(na)*10   ; degrees of the measurements
nb = 20                ; # of range bins
input = findgen(nb,na)  ; (bogus) range data at the angles
out = fltarr(nb,nb)     ; space for output image
y = (1+fltarr(nb)       ; image generator
for i=0,na=1 do out=out+rot(input(*,i)#y,angles(i))
```

The result, out, is the back-projected image of the input.

I'm looking for a better routine with options for other transforms and
scaling. I thought somebody might have something. I'd appreciate
seeing the code.

Thanks, Fred
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