
Subject: Need: general-purpose tomographic reconstruction routine

Posted by [Fred Knight](#) on Tue, 06 Jan 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

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

--

Fred Knight | knight@ll.mit.edu | 617 981 1053 | fax: 617 981 5359
C-490 | MIT Lincoln Laboratory | 244 Wood Street | Lexington, MA 02173
