DAS Array Response

(a) Array mapping

The slowness domain response of DAS array can be found using the script carray.run
That calls the routines arr_cftn, arr_cdisp
Carray.run takes three arguments, e.g.,:

   carray.run cab7 10.0 120.0

where cab1 is the array designator. Northings and eastings stored in cab7.ne.dat
10.0   Slowness of wavefront in s/deg
120.0. Azimuth of wavefront in deg

Relative slowness power for a 4 Hz wave is output by arr_cftn to cab7.kxky, with results for array response without orientation effects and for the radial and transverse components
This file is used by arr_cdisp to produce a postscript file cab7.ps containing images of the geometry of the array, with wavefront direction marked, and the relative power as a function of slowness.
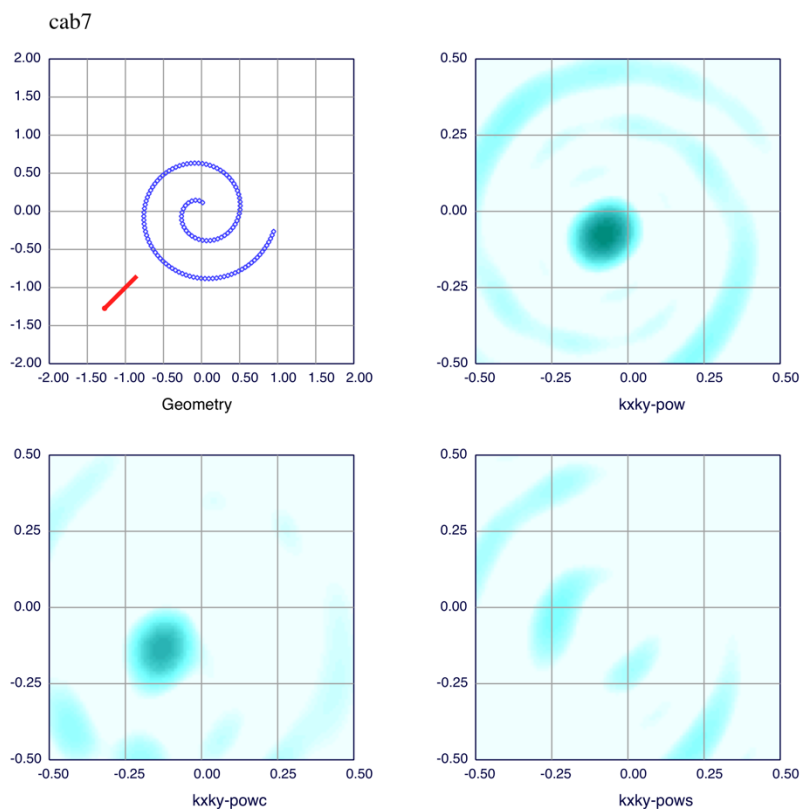
The version arr_kftn implements selective weighting to enhance the tangential component stacks at the expense of radial. This is run in the same way using the routine karray.run

Geometry for Archimedean spiral

The routine **aspira** calculates the northings and eastings of DAS cable positions along an Archimedean spiral: $r = a\,\theta$

The scale factor a, increment along the cable, number of elements and the start angle have to be specified:

Input:
```
write(6,*) "spiral scale"
read(5,*) ar
write(6,*) "cable increment"
read(5,*) sinc
write(6,*) "number of elements"
read(5,*) num
write(6,*) "starting angle (deg)"
read(5,*) pang
```

Output to file: aspira.out