LISST-VSF Particle Size Inversion

The following function will invert the ring detector data to a particle size distribution using the Fraunhofer model. The syntax is as follows:

```
[vd, dias] = lisstvsf_invert(Cscat,Sharpen,ShowProgressBar)
```

The first argument is the corrected scattering (**cscat**) from the structure returned from 'lisstvsf_makep.' The corrected ring scattering is stored in the variables 'proc.rings.cscat1' and 'proc.rings.cscat2.' The '1' and '2' refer to ring detector measurements with and without the half wave plate in place.

The following two argument are set to zero or one.

Sharpen – If set to 1, the function checks the width of the size distribution and increases the number iterations if the size distribution is wide (recommended).

ShowProgressBar – If set to 1, a progress bar will display the processing status.

The function will return the uncalibrated volume distribution (**vd**) and the midpoint of each size bin in microns (**dias**). In order to calculate the volume distribution in uL/L, the volume distribution returned by 'lisstvsf_invert' must be divided by the Volume Conversion Coefficient (VCC).