Examples	dshim dshim('method') dshim('help')	
See also	*NMR Spectroscopy User Guide*	
Related	method	Autoshim method (P)
	newshm	Interactively create a shim "method" with options (M)
	shim	Submit an Autoshim experiment to acquisition (C)
	stdshm	Interactively create a shim "method" (M)

dslsfrq — Bandpass filter offset for downsampling (P)

Description For downsampling, selects a bandpass filter that is not centered about the transmitter frequency. In this way, dslsfrq works much like lsfrq. If dslsfrq does not exist in the current experiment, add it by entering addpar('downsamp'). The command addpar('downsamp') creates the digital filtering and downsampling parameters downsamp, dscoef, dsfb, dslsfrq, and filtfile.

Values A number, in Hz. A positive value selects a region upfield from the transmitter frequency; a negative value selects a downfield region.

See also *NMR Spectroscopy User Guide*

Related		
	addpar	Add selected parameters to current experiment (M)
	downsamp	Downsampling factor applied after digital filtering (P)
	dscoef	Digital filter coefficients for downsampling (P)
	dsfb	Digital filter bandwidth for downsampling (P)
	filtfile	File of FIR digital filter coefficients (P)
	lsfrq	Frequency shift of the fn spectrum in Hz (P)
	movedssw	Set parameters for digital filtering and downsampling (M)
	pards	Create additional parameters used by downsampling (M)

dsn — Measure signal-to-noise (C)

Syntax dsn<(low_field,high_field)>:signal_to_noise,noise

Description Measures the signal-to-noise ratio of the spectrum by first measuring the intensity of the largest peak in the spectral range defined by sp and wp, and then measuring the noise in the spectral region defined by the position of the two cursors. The noise value returned from dsn is not scaled by vs. The interrelations between the signal-to-noise ratio, the noise, and peak intensities can be illustrated by comparing dsn:$sn,$noise and peak:$signal. In this case, $sn is equal to ($signal /$noise)/vs.

Calculate noise by first doing a drift correction on the noise region. Noise is defined as:

$$noise = 2x\left(\left(\sum_{i=1}^{np} Y_i^2\right) / np\right)^{\frac{1}{2}}$$

Y^2_i values are the square of the drift-corrected amplitude and np is the number of points in the noise region.

Arguments low_field and high_field are the upper and lower frequencies of the noise region to be measured. The default is the position of the two cursors.

signal_to_noise is the calculated value of signal-to-noise ratio.

noise is the noise value measured within the defined spectral region.

Examples
```
dsn:$ston
dsn(sp+sp,sp+wp-100)
dsn(10000,8000):r1
```

See also *User Programming*

Related

	dres	Measure linewidth and digital resolution (C)
	peak	Find tallest peak in specified region (C)
	sp	Start of plot (P)
	vs	Vertical scale (P)
	wp	Width of plot (P)

dsnmax — Calculate maximum signal-to-noise (M)

Syntax dsnmax<(noise_region)>

Description Finds the best signal-to-noise in a specified region.

Arguments noise_region is the size, in Hz, of the region. The default is the region between the cursors as defined by the parameter delta.

Examples
```
dsnmax
dsnmax(400)
```

See also *User Programming*

Related delta — Cursor difference in directly detected dimension (P)

dsp — Display calculated spectrum (C)

Syntax dsp<(file<,'nods'>)>

Description Using the current table of transitions and intensities, dsp recalculates the simulated spectrum (using the current value for the linewidth slw) and displays the spectrum. dsp can only be used after the spins program has been run. If only the linewidth slw or vertical scale svs have been changed, dsp can be used to redisplay the spectrum. If a