Gradient Shimming Troubleshooting Guide

If the profiles appear abnormal **ABORT SHIMMING** or gradient shimming will make the shims worse. If it already has, load the standard shim file in the File→ Open… dialogue or from the command line with "*rts('LOAD_ME') su*" (300,400) or "*rts('probeinitials_LOAD_ME') su*" (500,501,600) commands.
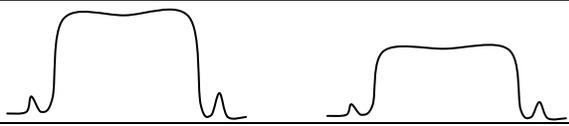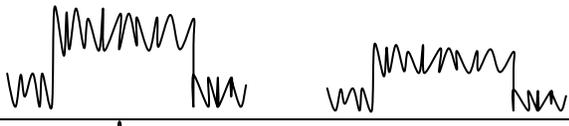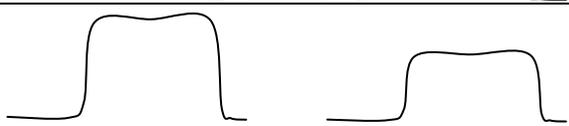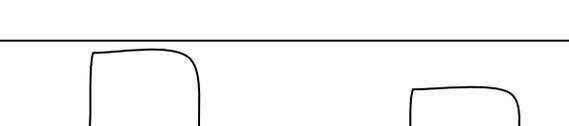
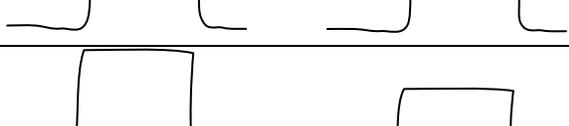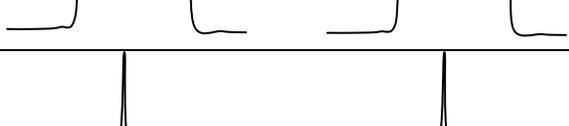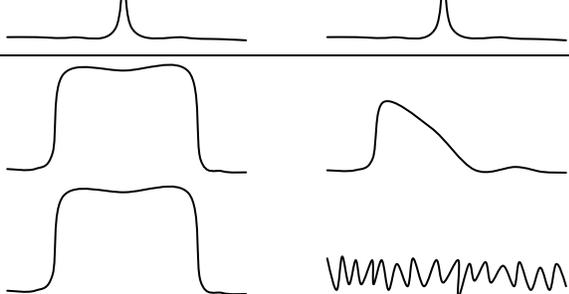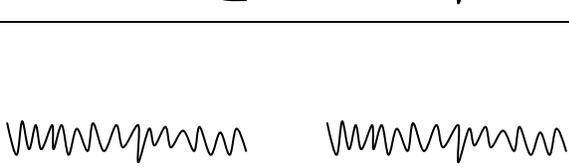|		
✔		Profiles broad and positioned in the center of the spectrum. Second profile same shape as the first but may be reduced in intensity
✔		Profile dips in center. This is characteristic of Varian designed probes and has no effect on shimming.
✔		"Ears" on one or both sides of profiles may appear on certain probes. These are a function of probe construction and have no effect on shimming.
✔		Profiles noisy but otherwise like above. OK on 300 and 400. Cause for concern on 500/501/600, please let us know.
✔		Spike in middle of the profile. Comes from DC offset on one of the receiver channels. Does not affect shimming
✘		Profiles broad but **displaced relative to center** of spectrum. **Cause**: Z0 and solvent mismatched. **Solution:** Check solvent setting and/or re-lock sample. For solvents with multiple 2H signals (e.g. toluene) make sure you are locking on the correct signal
✘		Profiles **cut off** with **one edge sharper** than the other. **Cause:** Sample too short and/or positioned incorrectly. **Solution:** Eject sample and make sure volume is centered on the "CL" line in the depth gauge.
✘		Profiles **cut off** with sharper edges than normal at **both** ends. **Cause:** Sample too short. **Solution:** Add solvent. Use Shigemi tubes to minimize additional solvent required.
✘		Profiles **look like narrow peaks**. **Cause:** Gradients turned off or malfunctioning. **Solution:** Turn on gradients by typing *pfgon='nny'* in the command line. If that doesn't fix it, let us know.
✘		Second profile **distorted** or **non-existent**. **Cause:** Poor field homogeneity. **Solution:** Load standard shimfile. If problem persists, insert standard sample (yellow tape). If standard works OK, the problem is inherent to your sample (e.g. precipitate, paramagnetic species, aggregation, high viscosity, inhomogeneous solution etc.). If standard doesn't work, let us know.
✘		No profiles visible. **Cause:** No 2H signal. **Solution:** Make sure the sample is inserted in the magnet correctly. If problem persists try the standard sample (yellow tape). If the standard works the problem is your sample (Did you use a deuterated solvent?). If the standard doesn't work let us know.