



Figure S1 – B_0 field distribution over the 8 slices used for DF-MRSI in one subject: (A) B_0 field maps in each slice (color map +/- 50 Hz), (B) histogram of frequency shift values within the brain over all 8 slices, (C) frequency drift in Hz measured from the water MRSI scan of 11 minutes duration (approximately 2500 transients in total). It can be seen that both field homogeneity over the volume of the brain, as well as B_0 stability, are good in this subject.