1) paraRec = 0 % =1 -use parallel (faster) recon, =0 -no parallel recon, may be needed when very, very large data sets (eg. a 64x64 slice, etc) and Matlab crashes/exits. However, since Matlab R2015b, haven't seen any problems with using paraRec=1

2) Ncpus = 16 % - number of cpu's to use in parallel reconstruction.

3) grid3D = 1 % = 1 for simultaneous gridding on x,y,t axis

4)fasterG = 1 % possible values 0,1,2. =0 slowest gridding, but sharpest PSF; =1 is a bit faster gridding with little loss in PSF sharpness; =2 is fastest gridding but for small values of gridding kernel W=1.5 or W=2 may have problems. I dont use =2 anymore.

5)NxZ = 32 % digital matrix to which data is reconstructed in X and Y. For acquisition matrix Nx<=30, NxZ defaults to 32; for Nx>30, NxZ defaults to 2*Nx.

6)NzZ = 1 % relevant only for 3D acquisitions (Nz>1)and it is the digital resolution to which data is reconstructed in Z. It defaults to 1 for 2D acquisitions and to 16 for 3D acquisitions.

7)NzR = 1 % relevant only for 3D acquisitions. It is the number of central slices which are actually saved, NzR<=NzZ and it is calculated based on the prescribed ROIz/FOVz during the acqusition. ROIz is excited FOV in Z-dir and FOVz is acquired FOVz: ROIz<=FOVz

8)zpad = 1 % if zpad=1, zero-pad data in the time domain. E.g., at 3T, for Taq=320ms and SW=1250Hz, number of spectral points is 400. This gets zeroppaded to Npad=512 points if zpad=1. At 7T, Npad=1024

9)Npad = 1024 % see point 8) above

10)gmon = 1 % if gmon=1, apply Gaussian line broadening

11)gmlb = 5 % If gmon=1, at 3T time domain data is broadened 2Hz. For BRAINO, manually set =5 for TR~300ms. At 7T, default is 5Hz.

12) cdon = 0 % If cdon=1, apply convolution difference filter. For BRAINO, typically use cdon=0.

13)cdlb = 150 % if cdlb=1, at 3T cdlb=50 and at 7T cdlb=150

14)W = 4.0 % Kaiser-Bessel kernel window for gridding in X- and Y-dir. Possible values 1.5,2,2.5,3.0,3.5,4.0

15)W2 = 4.0 % Kaiser-Bessel kernel window for gridding along time axis. Possible values 1.5,2,2.5,3.0,3.5,4.0. Typically, W2=W, but it doesn't need to be.

16)filXY = 2 % If filXY=0, no spatial filter is applied. If filXY=2, an elliptical Hanning filter. When wH=100 (see below), this is the usual (0.5*(1-cos))

17)wH = 100 % wH can take values from 0 to 100. When wH=100 (typical), filter used is (0.5*(1-cos)). If wH=0, no filter is used. If, for example, wH=40,the 60% in the center of k-space is a flat line (=1), and only 20% on each side (the egdes of k-space) gets filtered, with the edges reaching 0.08. This reproduces the behaviour and control of the Siemens implemented filter.

18)filZ = 0 %Filter for Z-direction; Hanning filter applied when filZ=1. Relevant only for 3D acquisitions.

19)wH_Z = 100 % relevant for 3D acquisitions, when filZ=1. wH_Z can take values from 0 to 100. See also explanation for wH (17)

20)TaqUsed = 300 % Acquisition time actually used for reconstruction. TaqUsed<=Taq. Default is TaqUsed=Taq but, when choosing a TaqUsed<Taq, data acquired past TaqUsed for each shot/readout is discarded.

22)Nacqs = 1 % This is typically Nacqs=1. But if multiple data sets were acquired to be averaged together, this needs to be changed to the number of data sets and then user will be prompted to select the additional sets.

23)savePics = 1 % savePics=1 will generate the figures and print/save them as jpgs. If savePics=0, no figures will be generated or saved (could save some time and also get around problems with Xtunneling if reconstruction done on a remote server).

24)pickGWave = 0 % If a new acquisition settings (Nx,FOV,nTI) were used and a new gradient waveform was generated, but is was not already added to default directory ~/ReconRSI/gradWaves/, it can be manually selected (if pickGWave=1)

25)saveGRID = 0 % saveGrid=1 saves the gridded data. It makes sense to use saveGRID=1 for data sets which take a very long time to grid/reconstruct

26)rsiWatRef = 0 % rsiWatRef=1 indicates a water reference data set is present and will be used. This is typically the case. For a LASER-RSI acquisition, or whenever no water reference is collected/present this should be 0.

27)scout = 1 % scout=1 when a gradient scout with same FOV as the RSI acquisition is collected. For Hadamard acquisitions, number of slices for scout is one greater than for RSI. For 3D acquisitions, the scout should be collected with no gap, the number of slices should be equal to NzZ or 2*NzZ, with slice thickness =FOVz/NzZ (or FOVz/(2*NzZ)).

28)saveLCM = 1 % saveLCM=1 - saves data in appropriate format to be processed with LCModel

29)saveLCMchs = 0 % saveLCMchs=1 saves all individual channels in LCM format

30)saveLCM_H20 = 0 % saveLCM_H20=1 saves all individual water channels in LCM format, if ECC (Eddy Current Correction) is to be performed, etc

31)saveCHS = 0 % saveCHS=1 -saves all individual channels, to be visualised in SID program

32)saveCHS_H20 = 0 % saveCHS_H20=1 -saves all individual water reference channels, to be visualized in SID program