mcDESPOT Fitting Simulations

Samuel A. Hurley
Pouria Mossahebi

12-Feb-2010
Proj/mcDESPOT

Simulation Parameters

SNR = ∞
Noise Realizations = 50

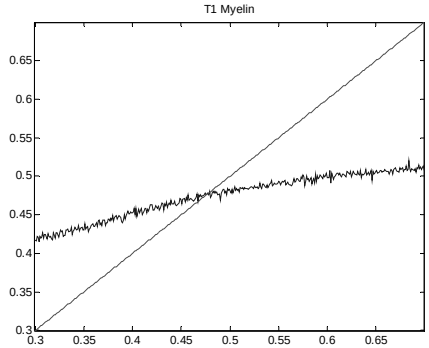
Mode = 0 (Fitting SSFP-180 and SSFP-0 /w combined B_0 fitting)
TR_{spgr} = 6.5 ms
TR_{ssfp} = 5.0 ms

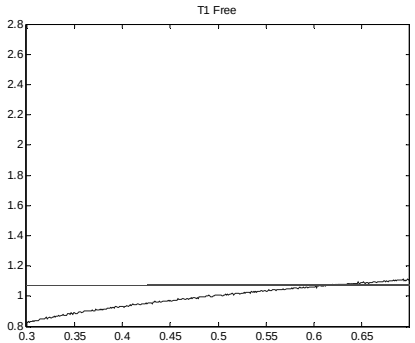
α_{spgr} = [3 4 5 6 7 9 13 18]˚
α_{ssfp} = [12 16 21 27 33 40 51 68]˚

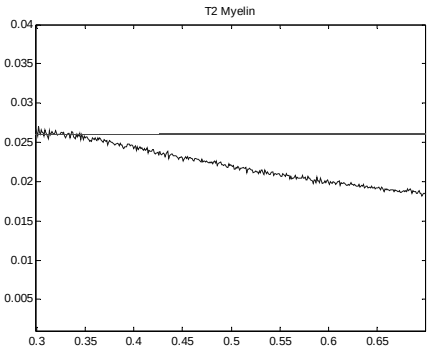
(Same flip angles as our scanner protocol)

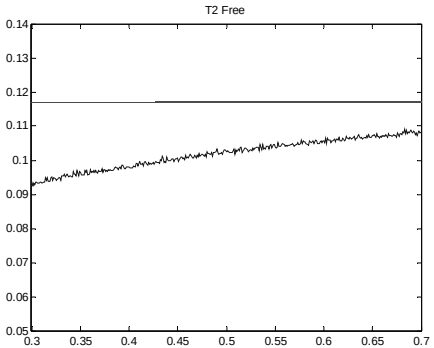
Default NMR Parameters

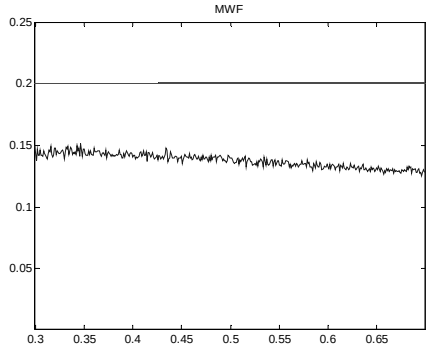
```
t1_m = 0.465;
t1_f = 1.07;

t2_m = 0.026;
t2_f = 0.117;

fract = 0.20;
tau   = 0.100;

('Average values' defined in Deoni mcDESPOT paper)
```

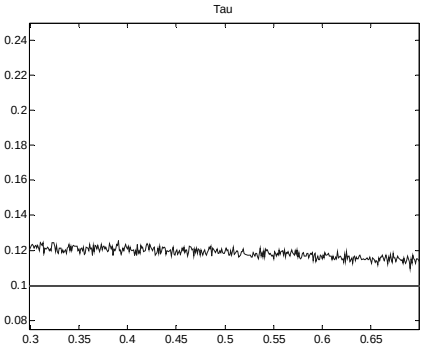

T1 Myelin

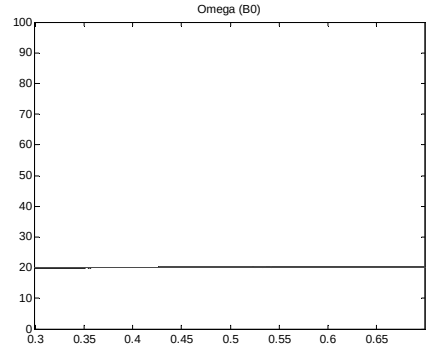

T1 Free

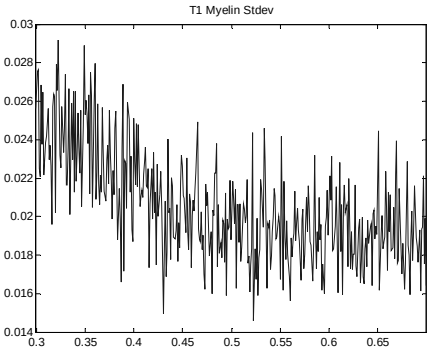

T2 Myelin

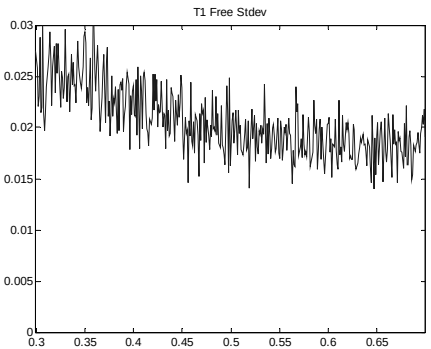

T2 Free

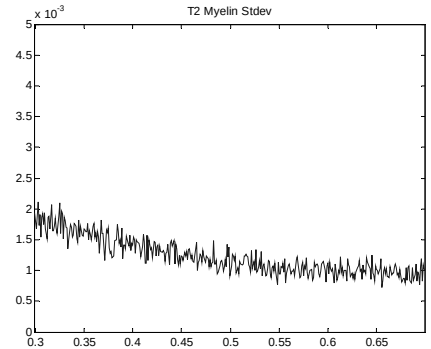

MWF

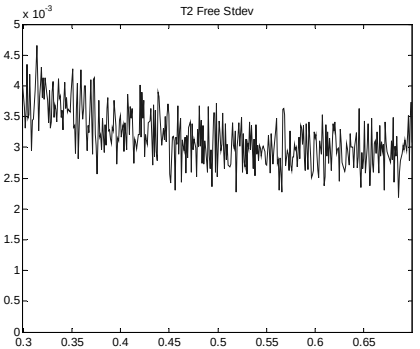

Tau

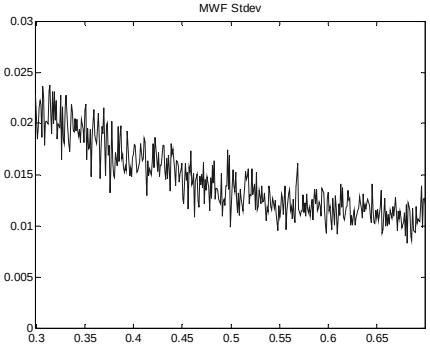

Omega (B0)

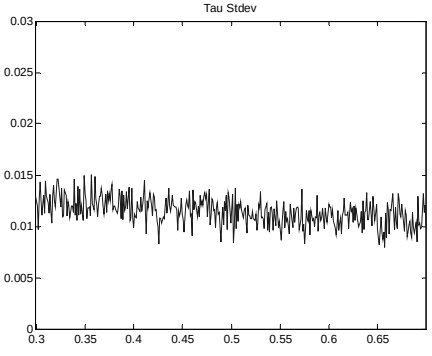

T1 Myelin Stdev

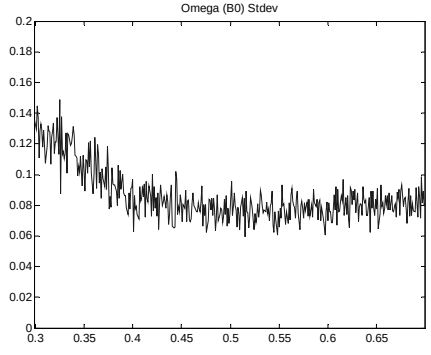

T1 Free Stdev

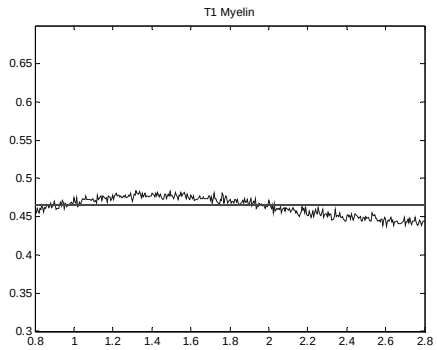

x 10-3
T2 Myelin Stdev

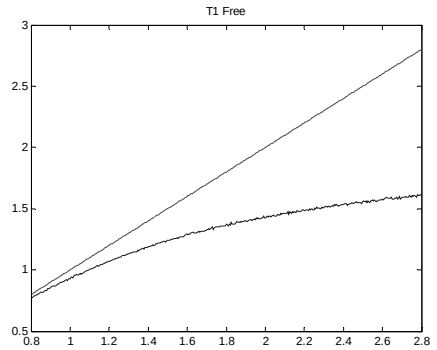

x 10-3
T2 Free Stdev

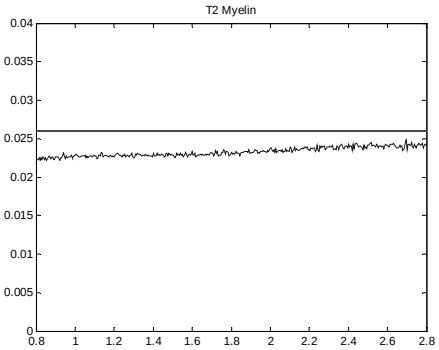

MWF Stdev

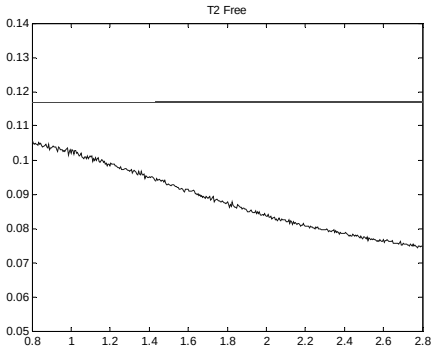

Tau Stdev

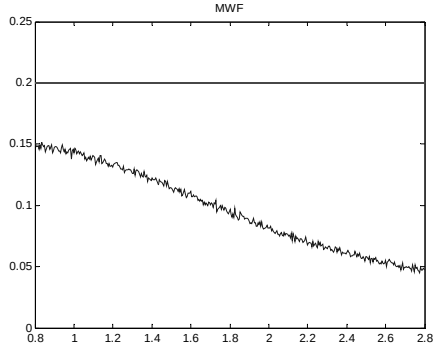

Omega (B0) Stdev

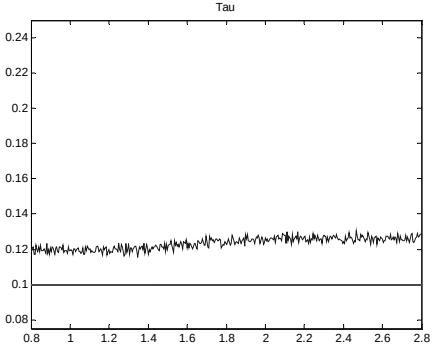

T1 Myelin

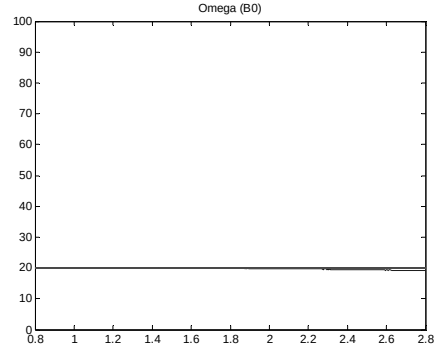

T1 Free

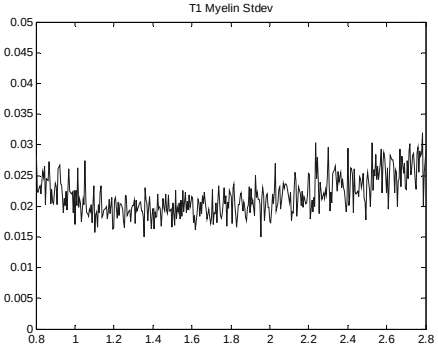

T2 Myelin

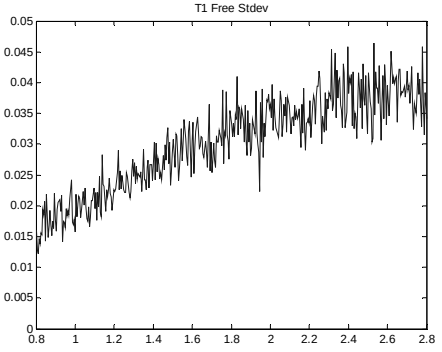

T2 Free

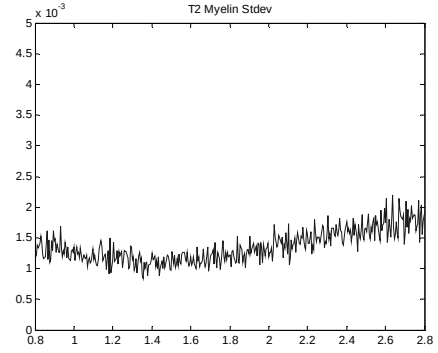

MWF

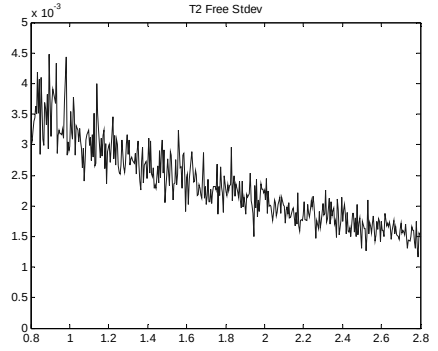

Tau

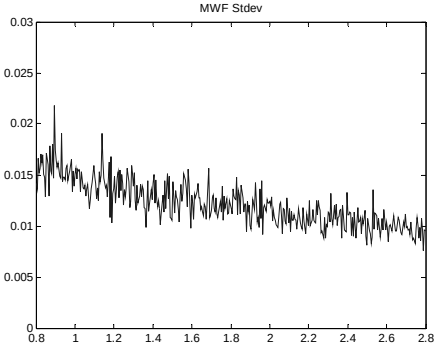

Omega (B0)

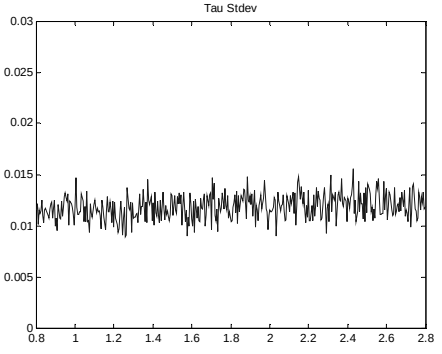

T1 Myelin Stdev

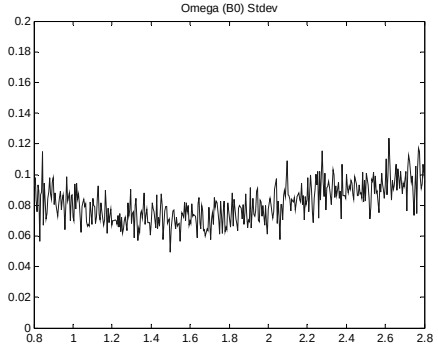

T1 Free Stdev

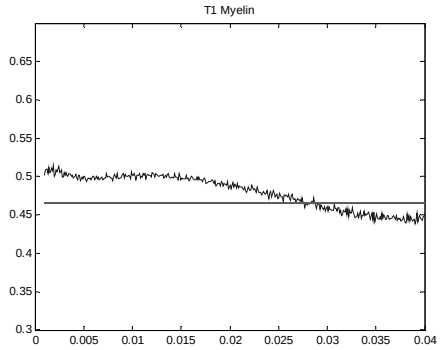

T2 Myelin Stdev
x 10-3

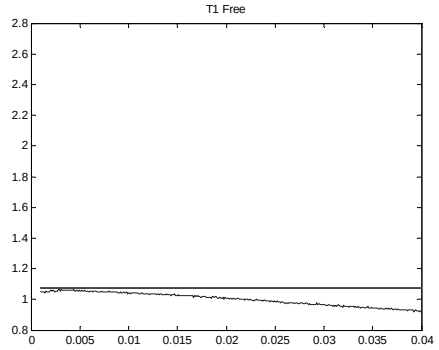

T2 Free Stdev
x 10-3

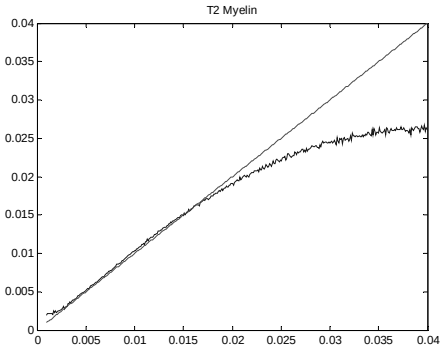

MWF Stdev

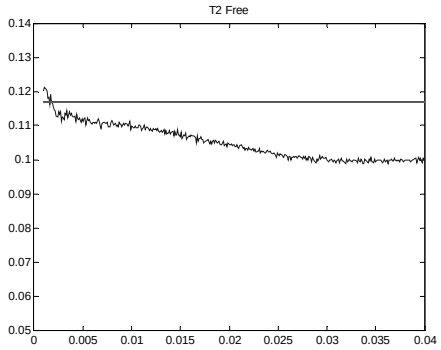

Tau Stdev

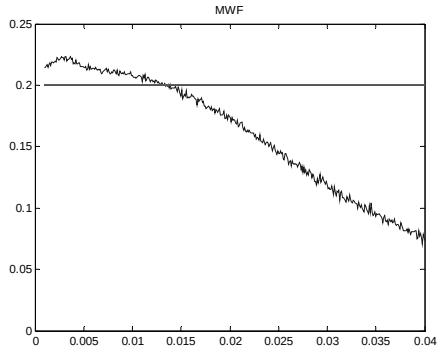

Omega (B0) Stdev

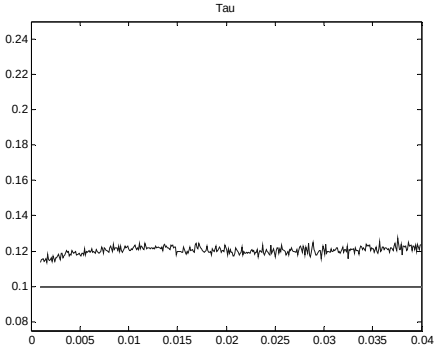

T1 Myelin

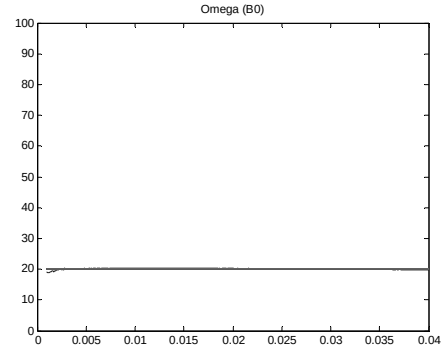

T1 Free

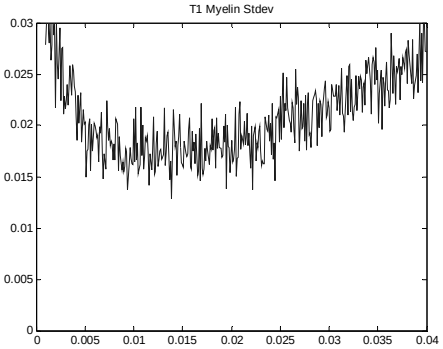

T2 Myelin

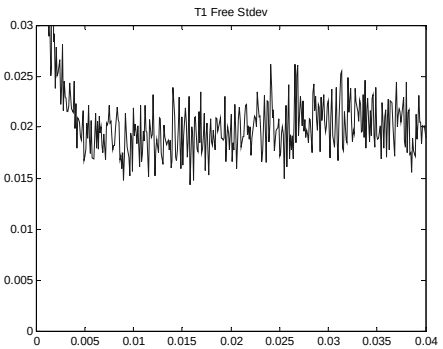

T2 Free

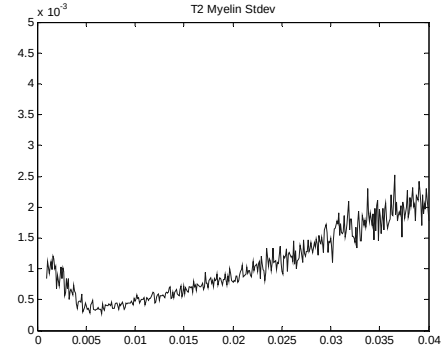

MWF

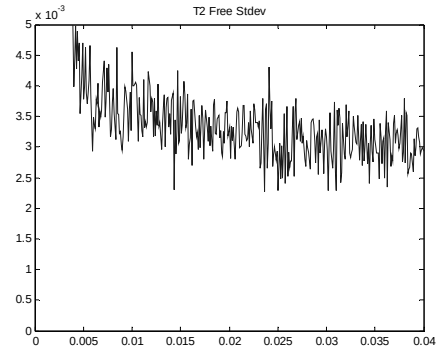

Tau

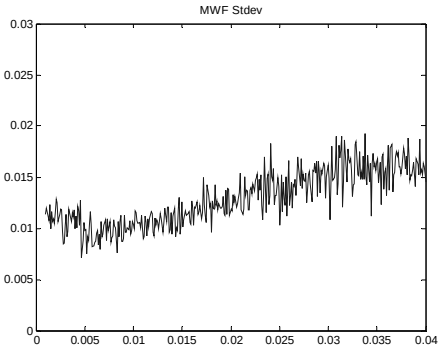

Omega (B0)

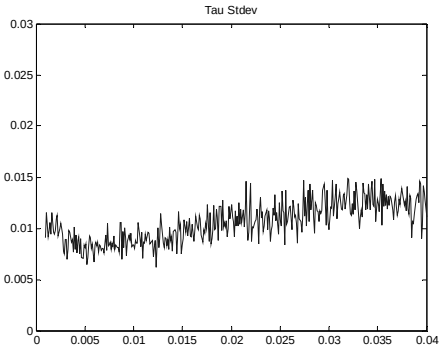

T1 Myelin Stdev

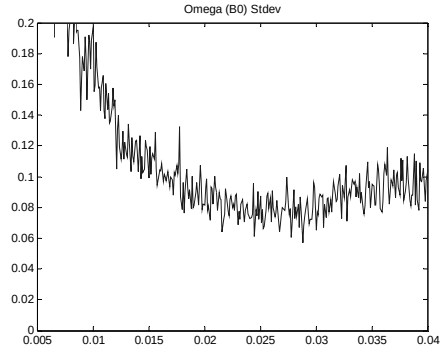

T1 Free Stdev

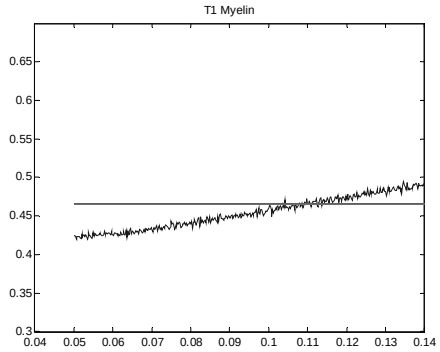

T2 Myelin Stdev
x 10-3

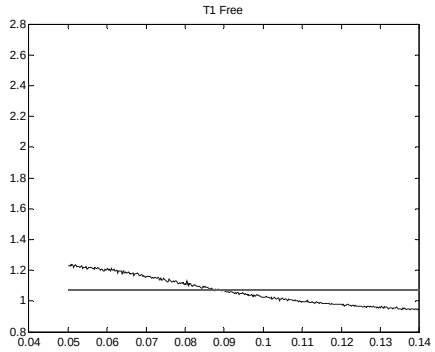

T2 Free Stdev
x 10-3

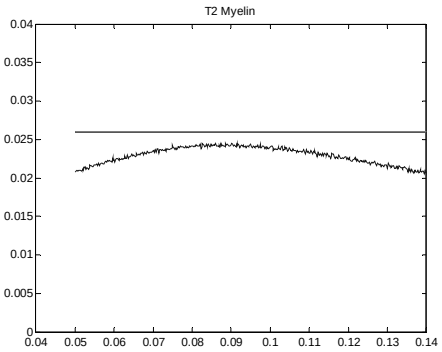

MWF Stdev

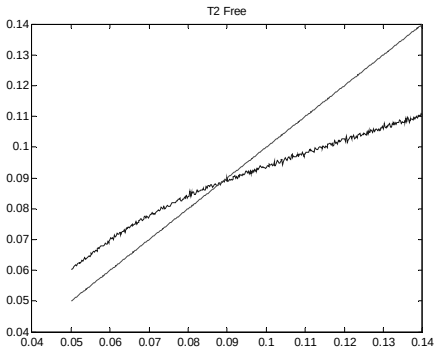

Tau Stdev

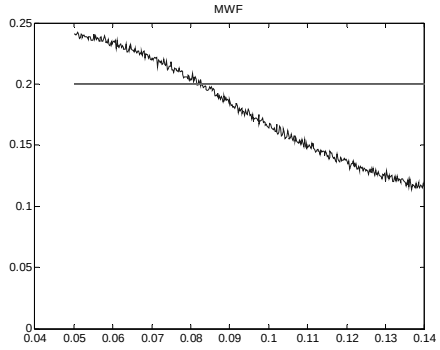

Omega (B0) Stdev

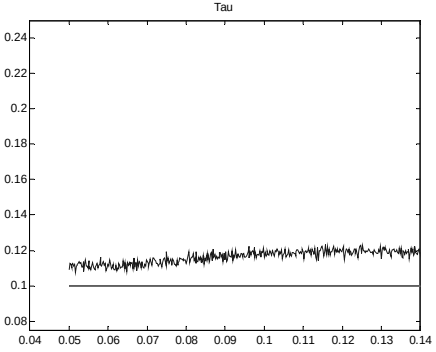

T1 Myelin

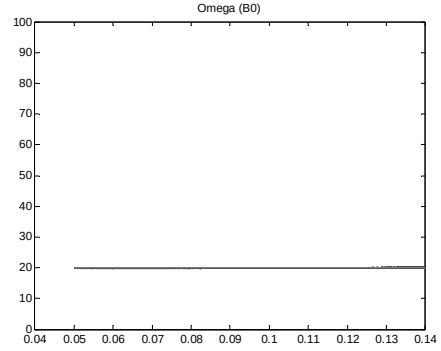

T1 Free

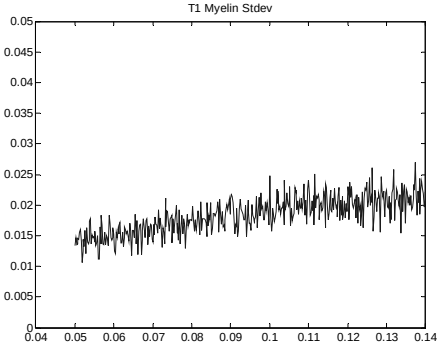

T2 Myelin

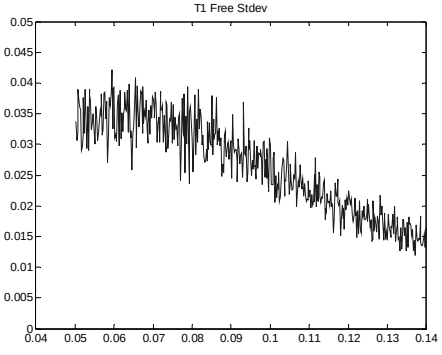

T2 Free

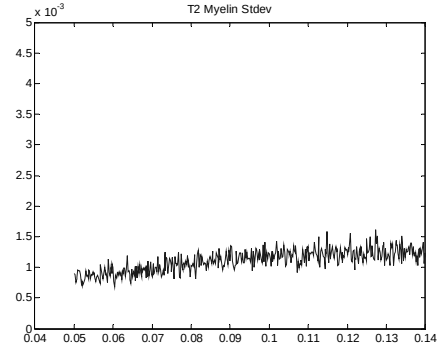

MWF

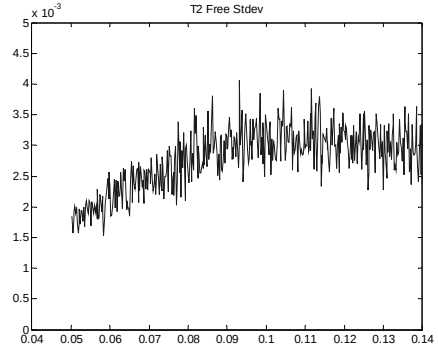

Tau

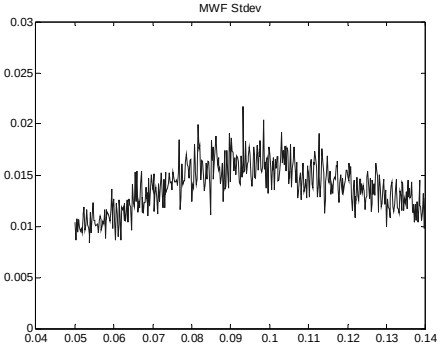

Omega (B0)

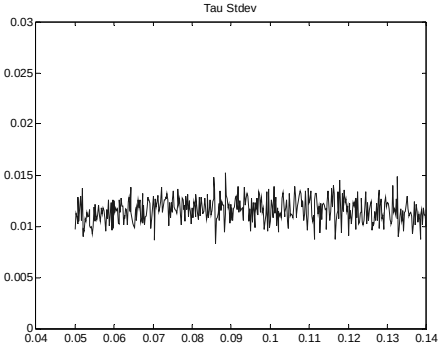

T1 Myelin Stdev

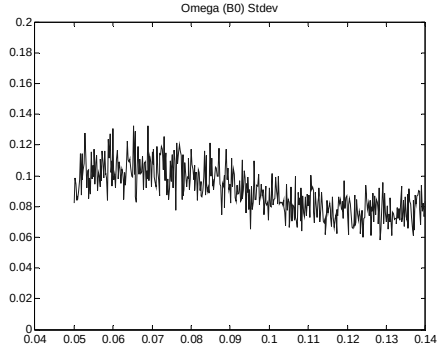

T1 Free Stdev

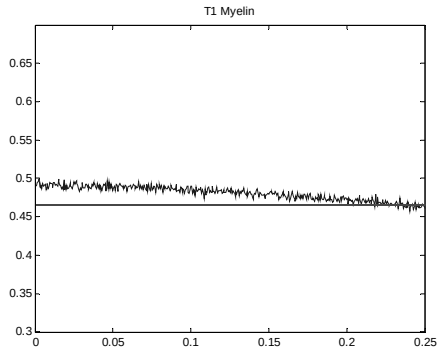

x 10-3
T2 Myelin Stdev

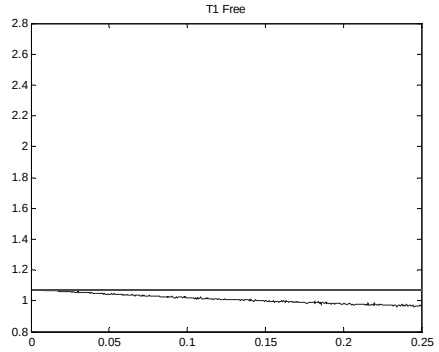

x 10-3
T2 Free Stdev

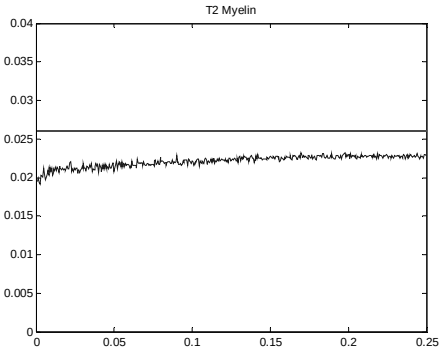

MWF Stdev

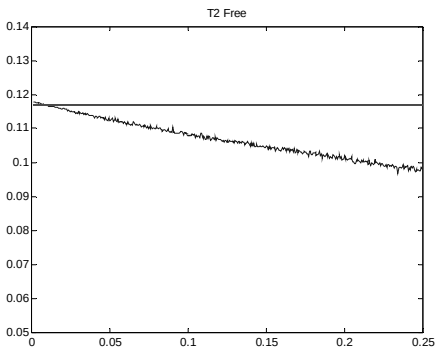

Tau Stdev

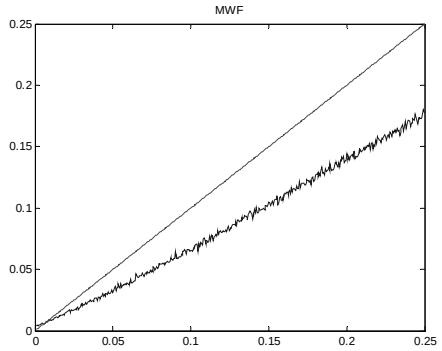

Omega (B0) Stdev

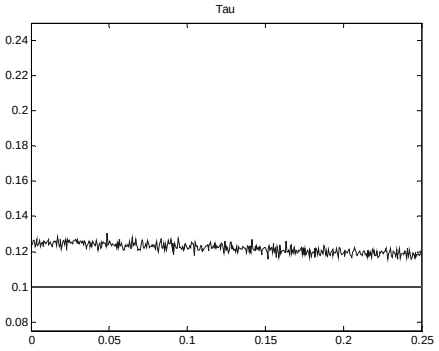

T1 Myelin

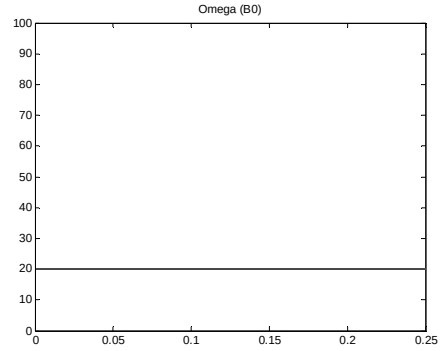

T1 Free

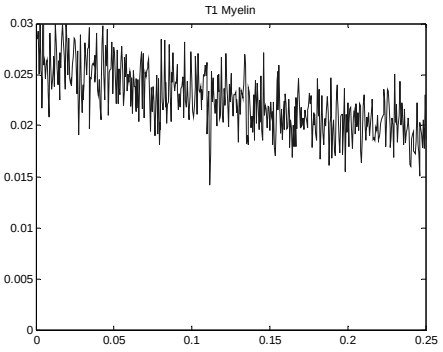

T2 Myelin

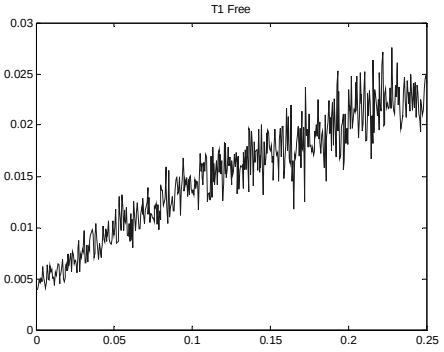

T2 Free

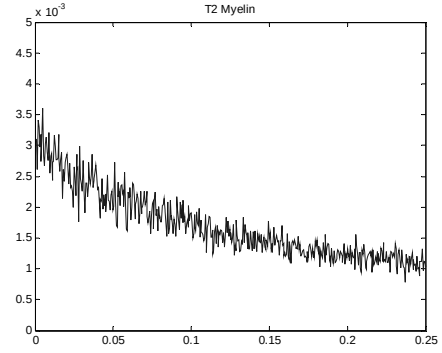

MWF

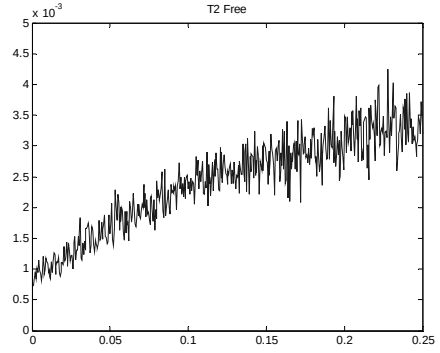

Tau

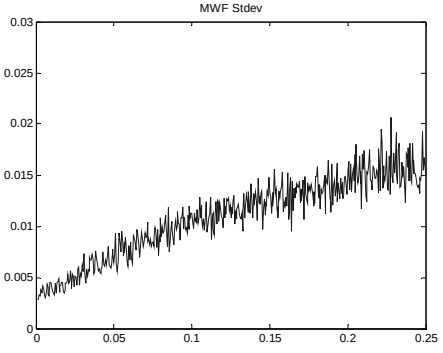

Omega (B0)

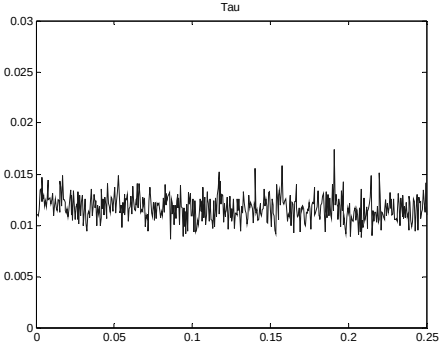

T1 Myelin

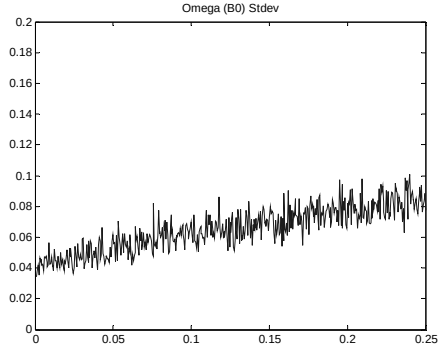

T1 Free

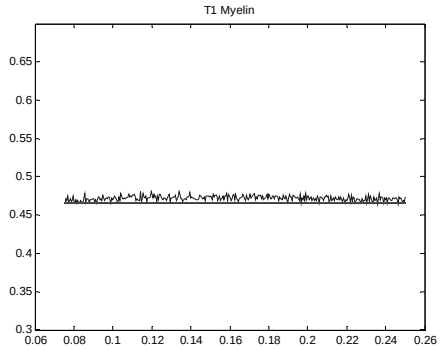

x 10-3
T2 Myelin

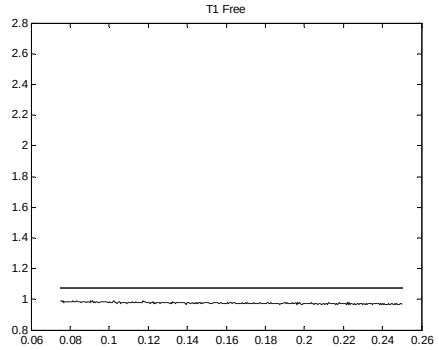

x 10-3
T2 Free

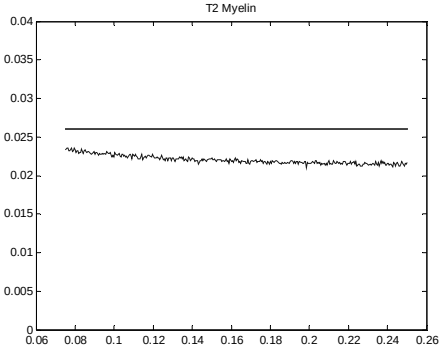

MWF Stdev

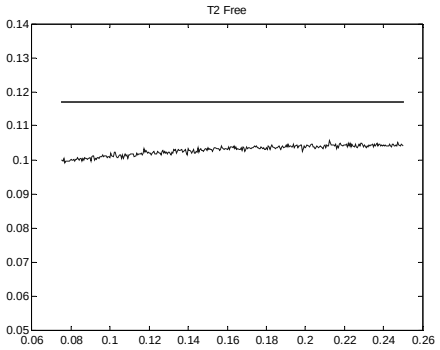

Tau

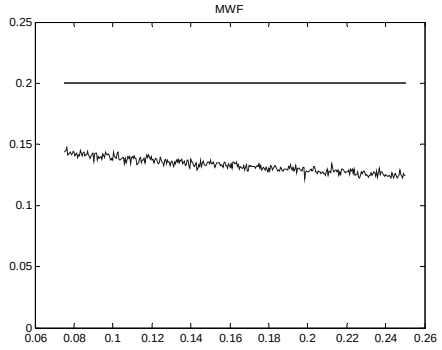

Omega (B0) Stdev

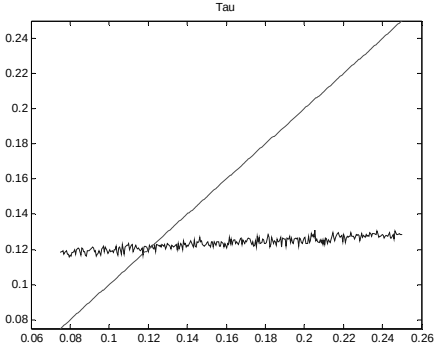

T1 Myelin

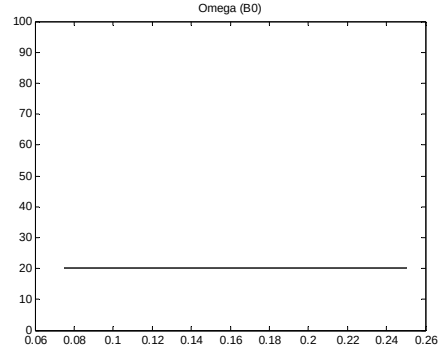

T1 Free

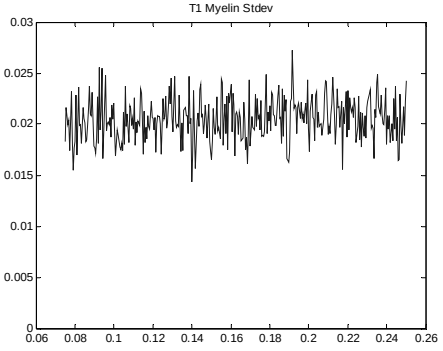

T2 Myelin

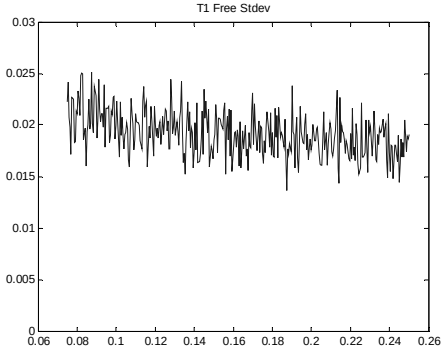

T2 Free

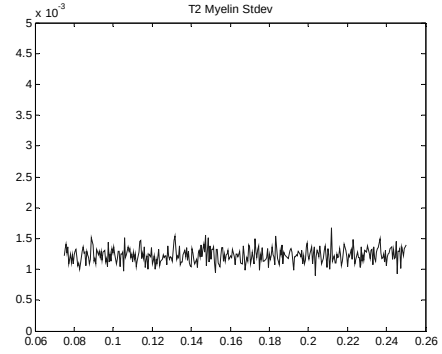

MWF

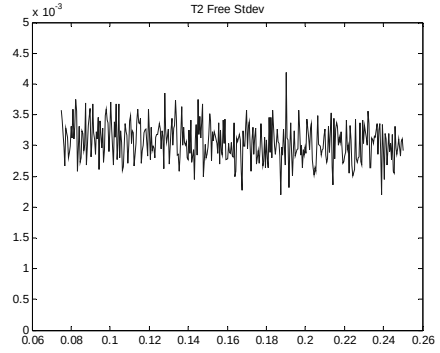

Tau

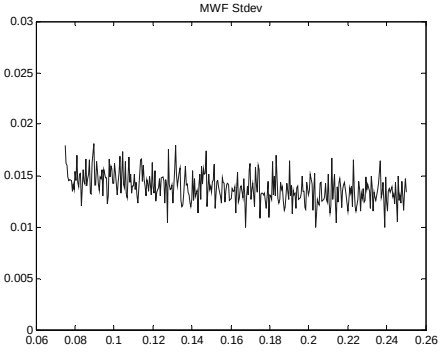

Omega (B0)

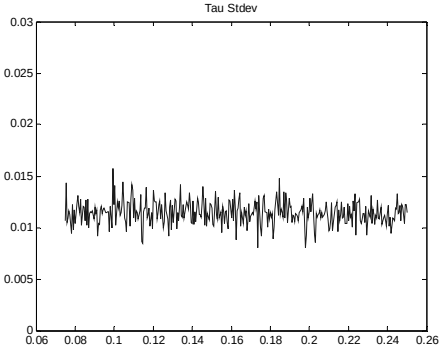

T1 Myelin Stdev

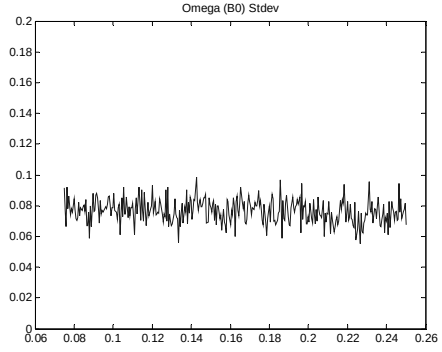

T1 Free Stdev

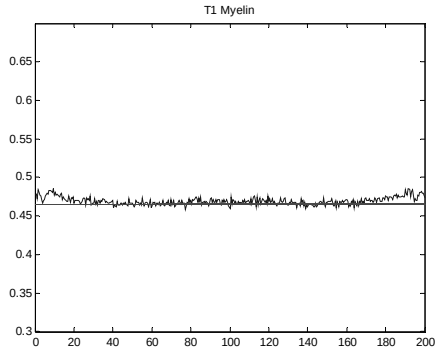

x 10-3
T2 Myelin Stdev

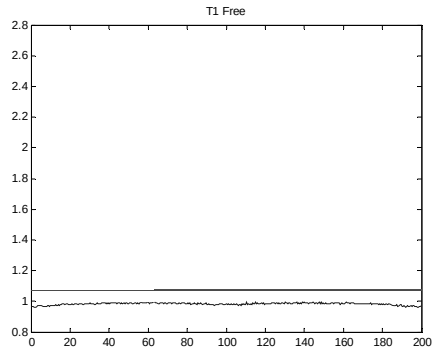

x 10-3
T2 Free Stdev

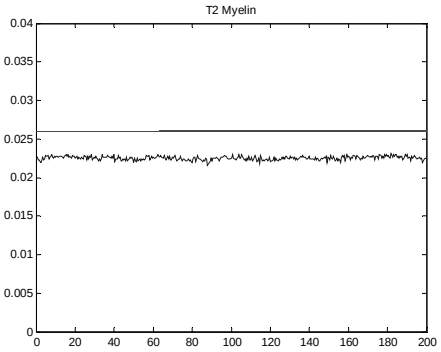

MWF Stdev

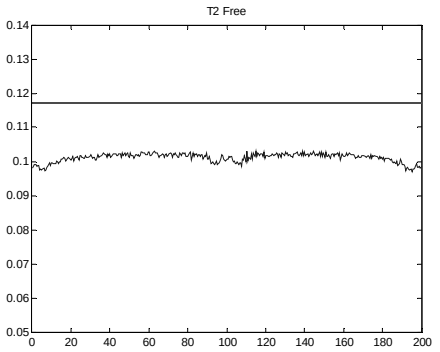

Tau Stdev

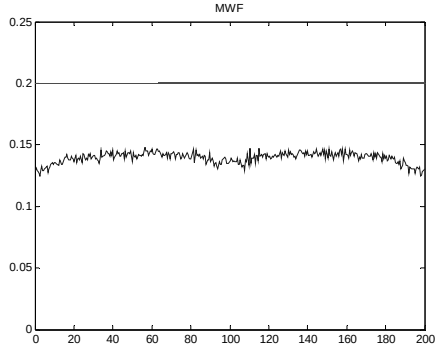

Omega (B0) Stdev

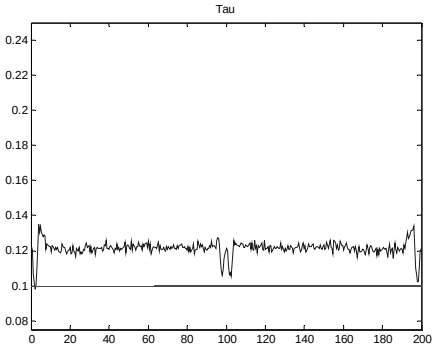

T1 Myelin

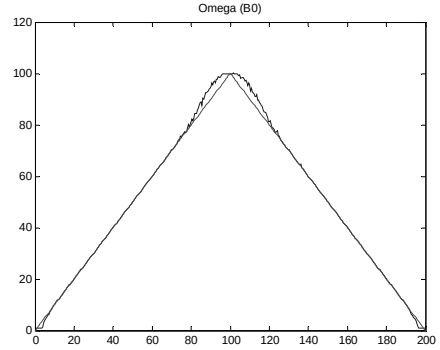

T1 Free

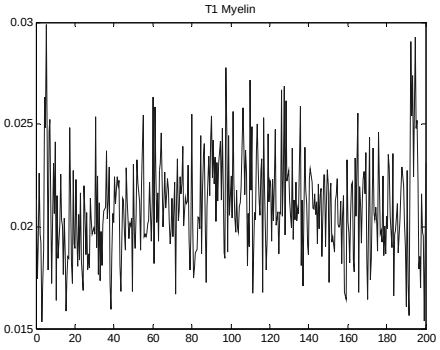

T2 Myelin

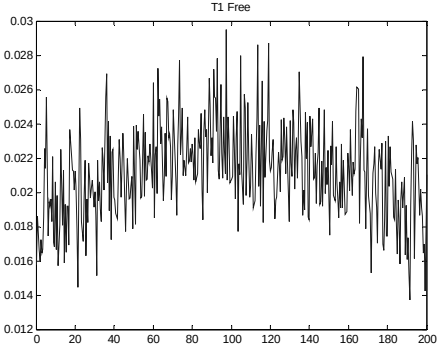

T2 Free

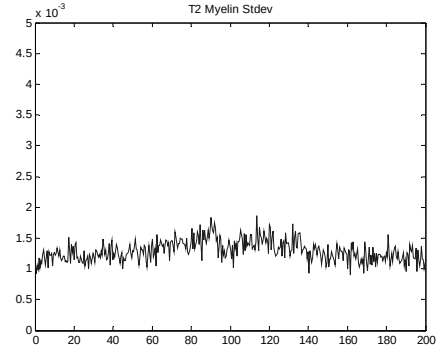

MWF

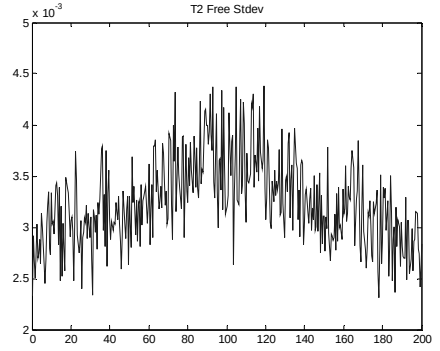

Tau

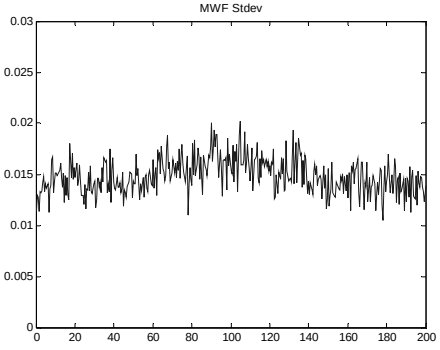

Omega (B0)

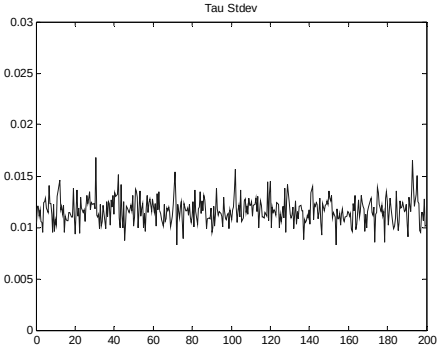

T1 Myelin

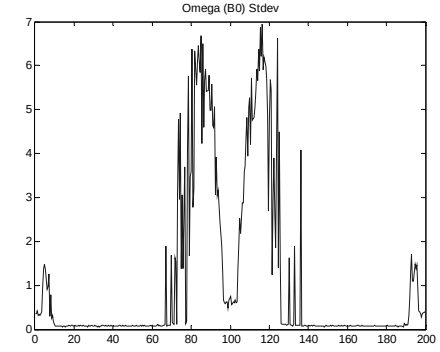

T1 Free


T2 Myelin Stdev


T2 Free Stdev


MWF Stdev


Tau Stdev


Omega (B0) Stdev