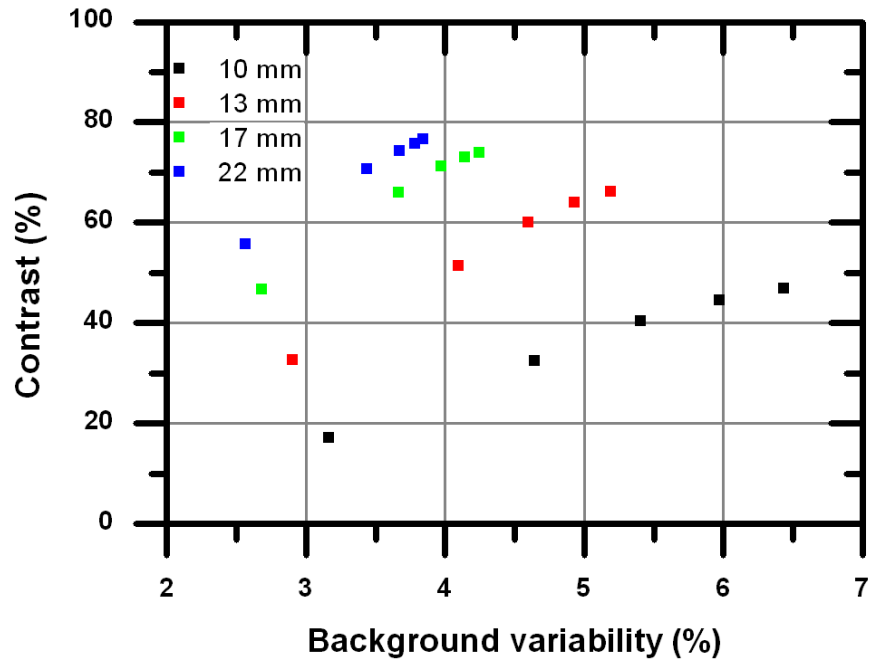
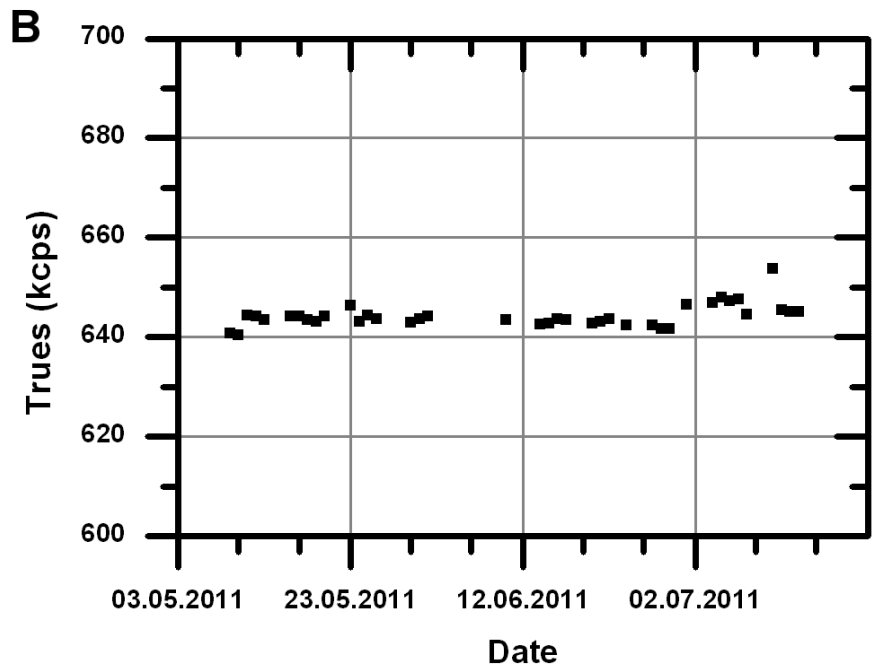
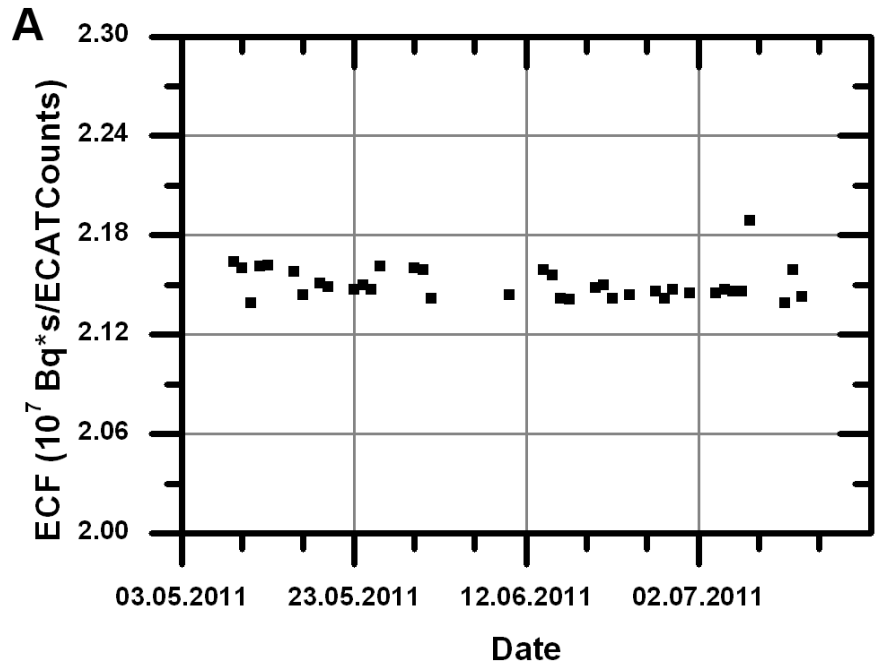


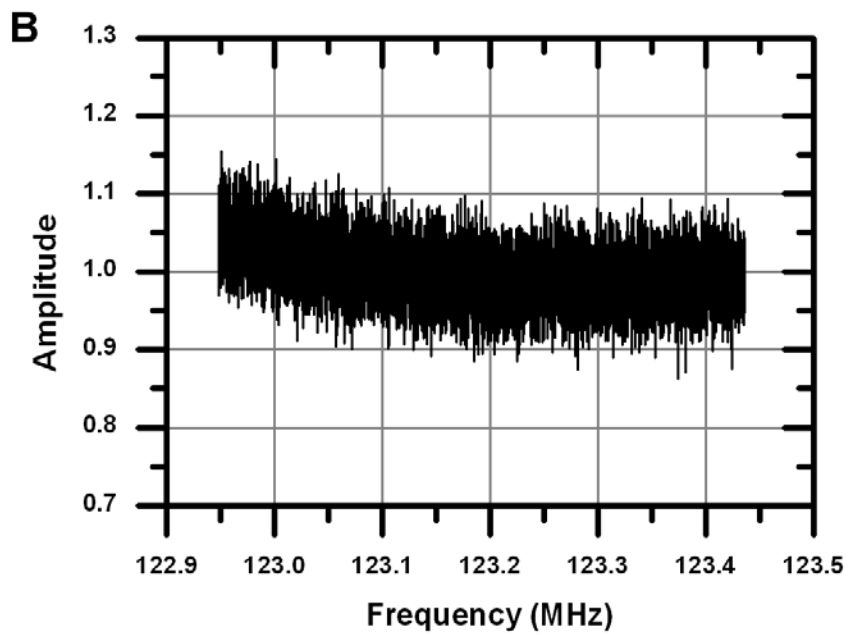
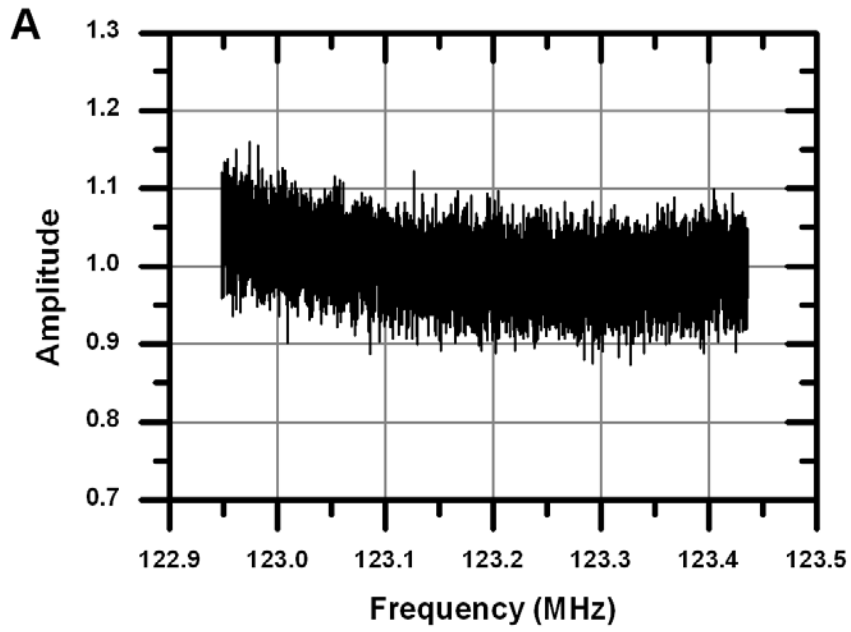
SUPPLEMENTAL FIGURE 1 – Diagram of the Biograph mMR, depicting how the PET detectors are located within the MR coils.

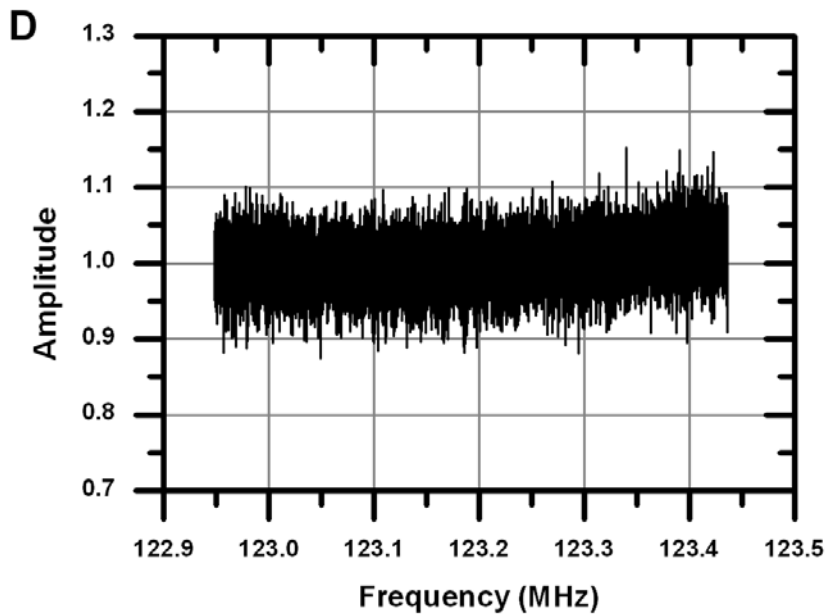
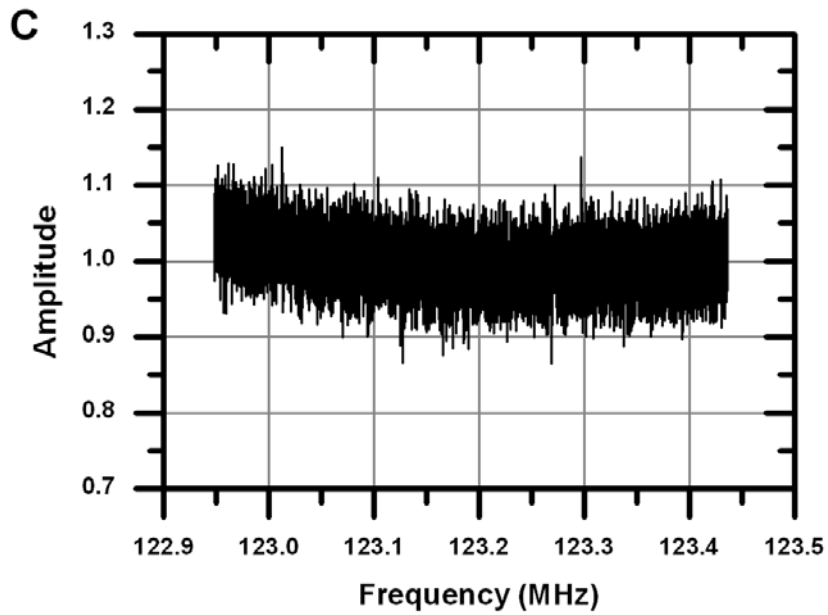


SUPPLEMENTAL FIGURE 2 – Effect of the number of reconstruction iterations (1 to 5 iterations) on the contrast and background of the reconstructed spheres.



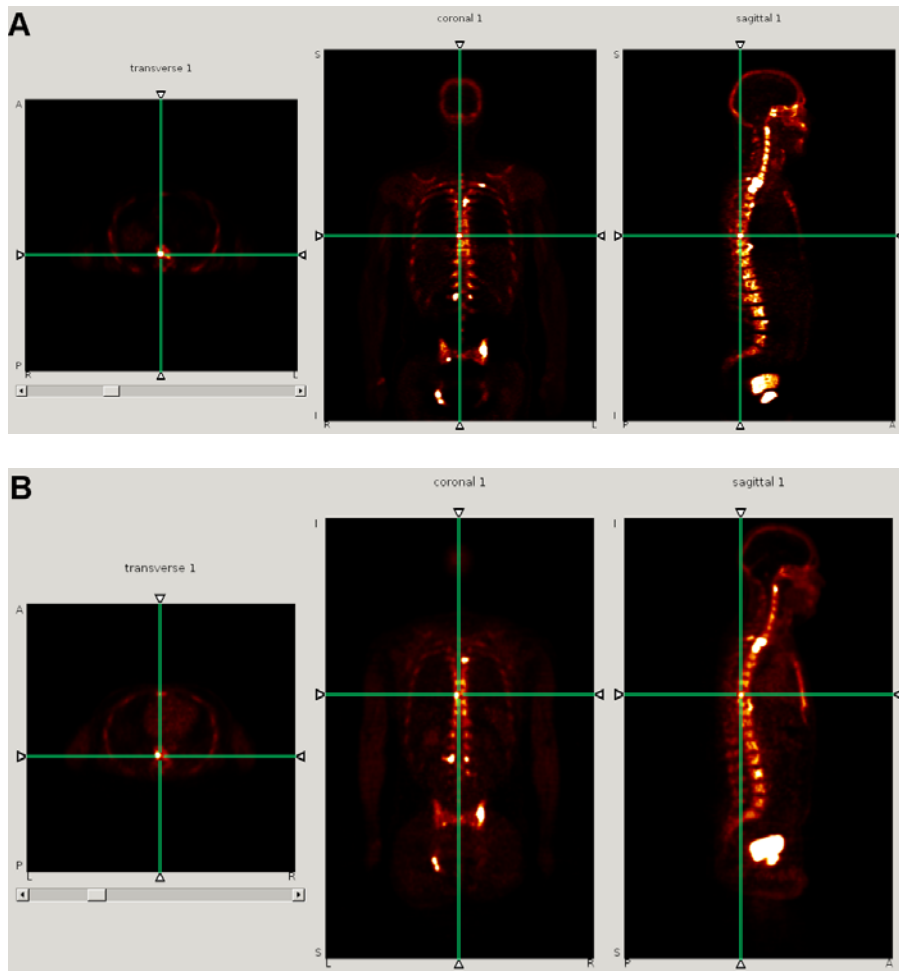
SUPPLEMENTAL FIGURE 3 – Temporal evolution of (a) the scanner’s calibration factor and (b) decay-corrected true counts during calibration.





SUPPLEMENTAL FIGURE 4 – Normalized radiofrequency noise spectra:

a) mMR with the PET electronics powered off. b) mMR with the PET electronics powered on. c) Idem, in the presence of activity. d) Verio.



SUPPLEMENTAL FIGURE 5 – a) mMR PET/MR and b) Biograph PET/CT views of a whole-body  $^{18}\text{F}$ -Fluoride scan of the same patient.