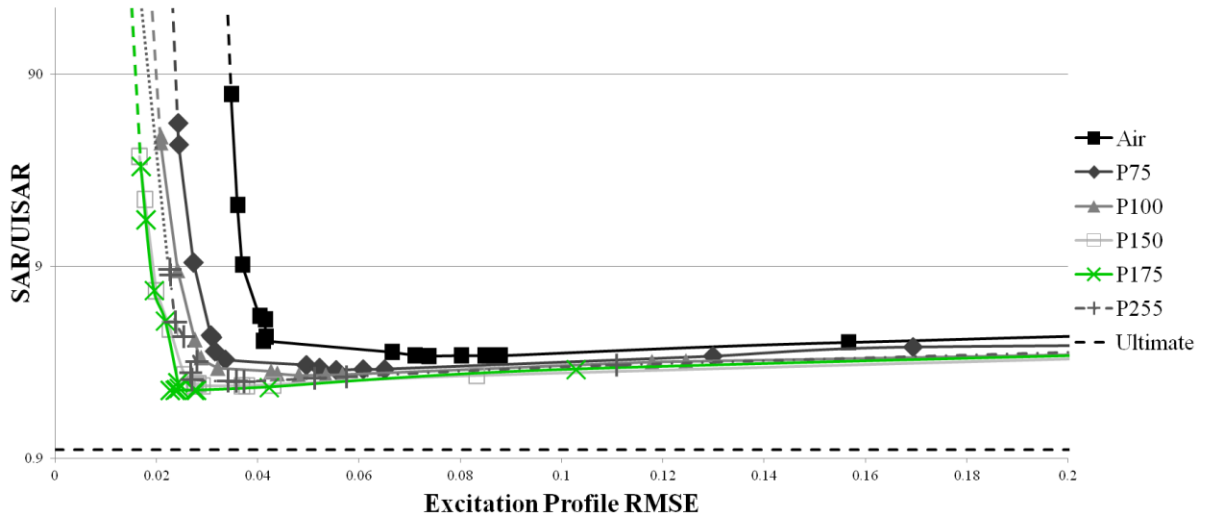
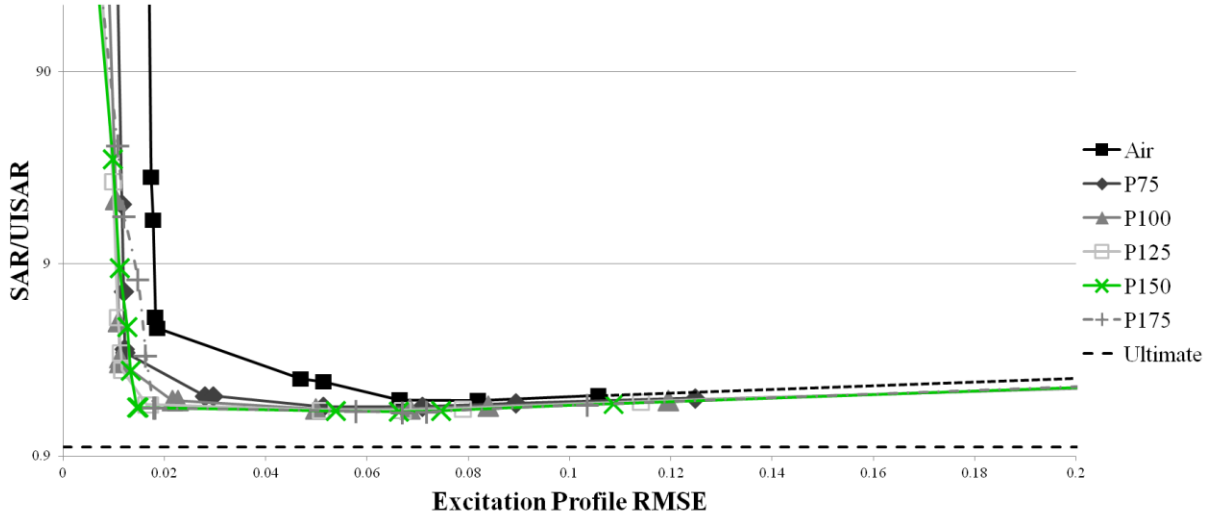


24 Coils: RMSE vs SAR/UISAR



32 Coils: RMSE vs SAR/UISAR



Supporting Figure S1: Optimization of high permittivity material for 24- and 32-channel coil arrays, top and bottom, respectively. Increasing the relative permittivity values (solid lines) improves coil performance up to an optimum permittivity, shown in green with “x” markers. Increasing the relative permittivity beyond the optimal value degrades coil performance (dashed-dot lines indicated with +). Using the optimal permittivity for the HPM improves array performance considerably compared to the case without HPM. Numerical values in legends indicate relative permittivity of the HPM. Dashed lines indicate approximation of L-curve not visible using current RF shimming algorithm.