

## PET stability measurements during simultaneous multi-nuclear ( $^{23}\text{Na}$ ) MRI/PET acquisition

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PET/MR presents a unique opportunity to acquire simultaneous, complementary, functional imaging data in human and animal studies. Specifically,  $^{23}\text{Na}$  and  $^{13}\text{C}$ , termed 'x-nuclei', present novel imaging contrasts which inform upon cellular function. Due to the differing magnetic properties of x-nuclei, increased demands are placed upon gradient and RF hardware for acquisition. However, little data has been shown assessing the performance of PET detectors during x-nuclei MR imaging acquisitions. This study demonstrates negligible effect of a 3D  $^{23}\text{Na}$ -MRI sequence on the PET detection performance and count rate. We believe these results will help inform future studies integrating  $^{23}\text{Na}$ -MRI in simultaneous PET/MR acquisitions.

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