Reproducibility of tailored and universal non-selective excitation pulses at 7T for human cardiac MRI: A 3-year and an inter-day study

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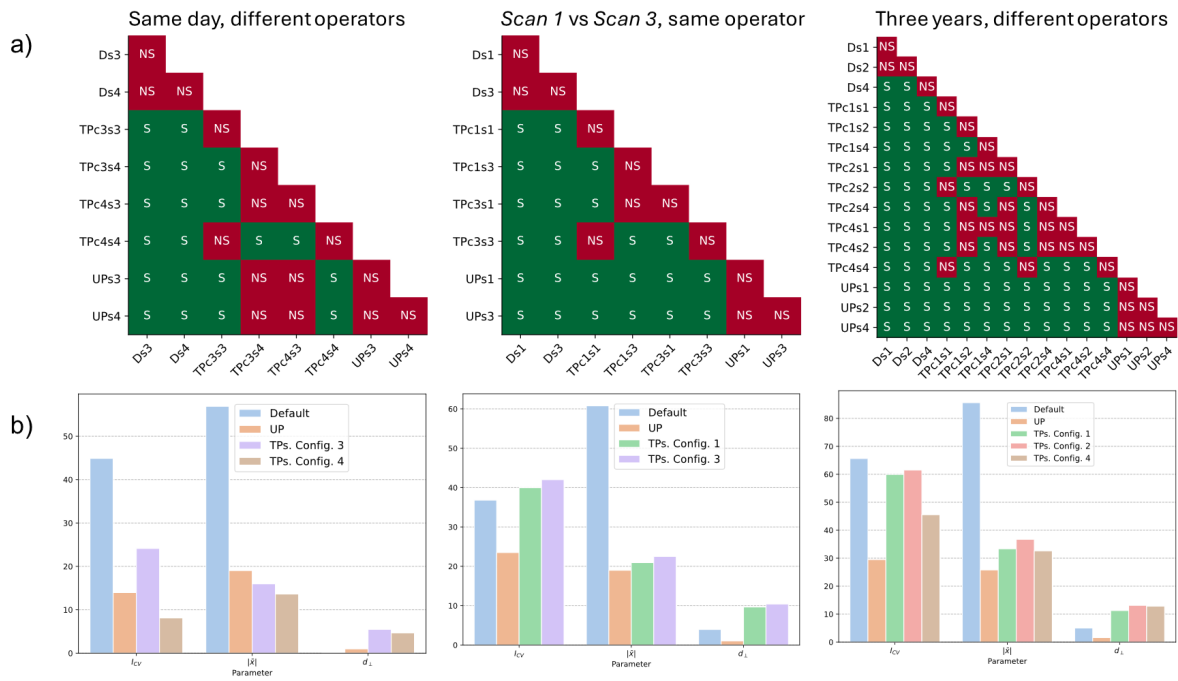
Supporting Information Figure S1: Statistical significances obtained from the CV results obtained from different shim methods, scan groups, and TPs configurations are detailed in (a). A significant difference between two scan groups is denoted by a white "S" in a green background, while non-significative differences are indicated by a white "NS" in a red background. The prefixes D, TP, and UP denote results from Default, TPs, and UP shim methods, respectively. Additionally, identifiers c1 to c4 correspond to results from TPs in *Config.1* to *Config.4*, while suffixes s1 to s4 denote results from *Scan 1* to *Scan 4* groups, respectively. In (b), values of I_{CV}, $|\overline{x}|$ and $d_\perp$ for each shim method, normalized to the maximum value reported among all shim groups, are presented. Top- and bottom-left figures correspond to data obtained from *Scan* 3 and *Scan* 4 datasets. The top- and bottom-center figures correspond to data obtained from *Scan* 1 and *Scan* 3 datasets. Top- and bottom-right figures correspond to data obtained from *Scan* 1, *Scan* 2, and *Scan* 4 datasets.
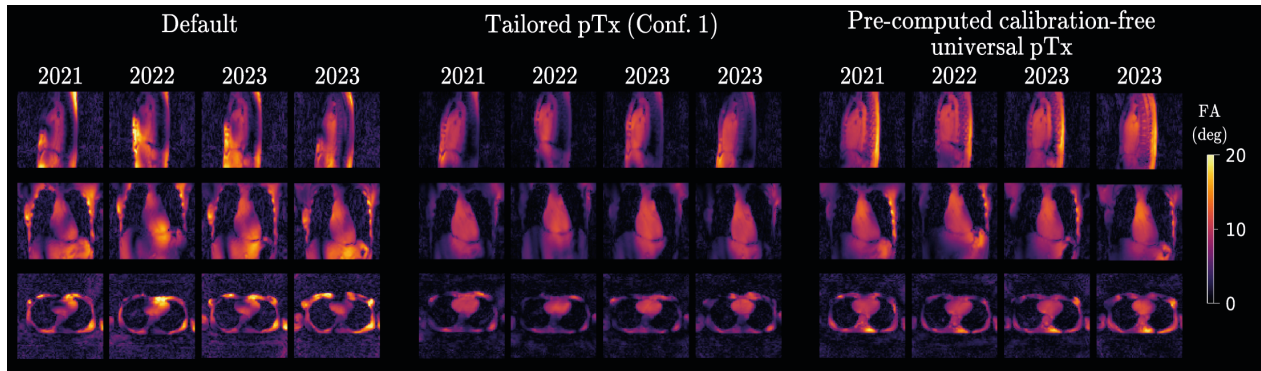
Supporting Information Figure S2: This figure depicts 3D flip angle predictions for the human heart utilizing Default, TPs (*Conf. 1*), and UP shim methods. The data correspond to all four scans conducted on the sixth subject.
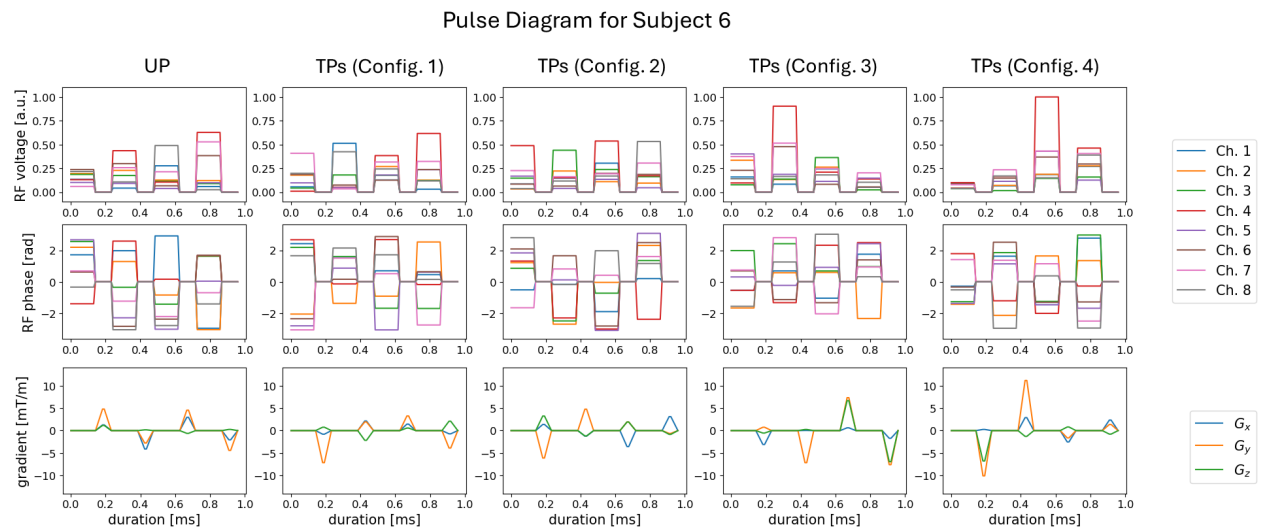
Supporting Information Figure S3: Pulse diagram of complex RF voltages (magnitude and phase) and 3D gradient blips of the UP and TPs method (all configurations) of the sixth subject. The RF voltage of each pTx pulse was scaled to achieve a nominal FA of 10° in the 3D heart ROI, allowing for quantitative comparisons of RF voltages between different pulses.