Supporting Information: Simultaneous Multislice MRI Thermometry with a Single Coil Using Incoherent Blipped-Controlled Aliasing

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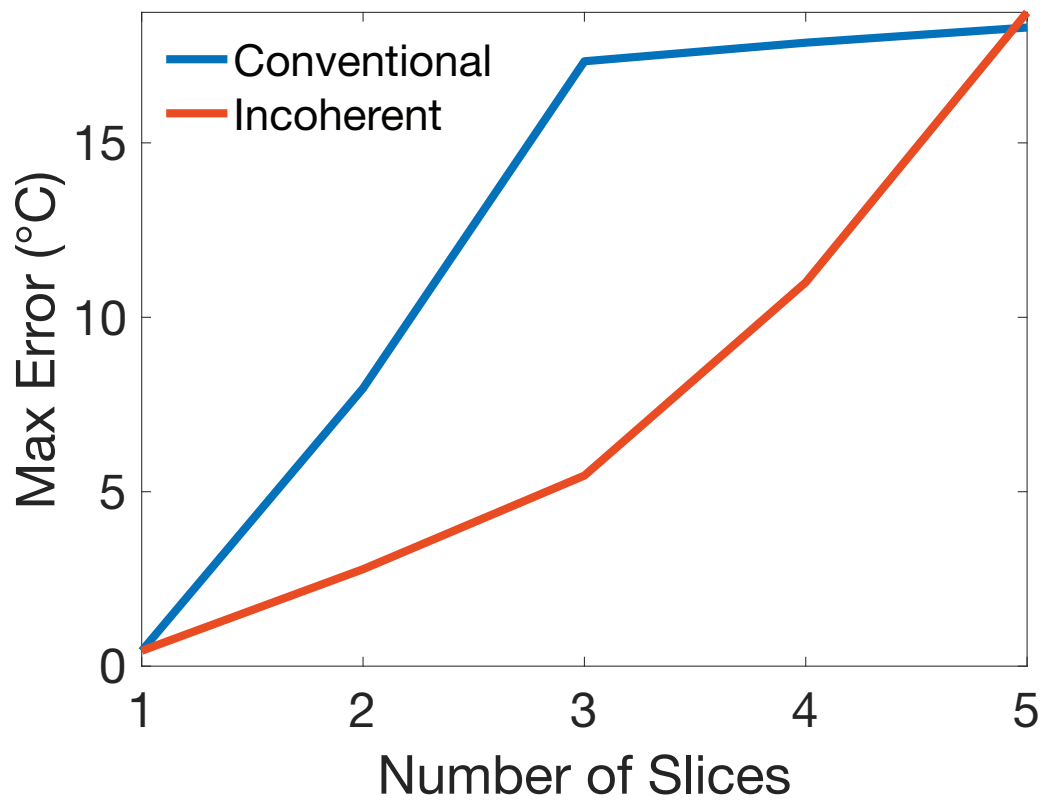Vanderbilt University Institute of Imaging Science
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Supporting Information Figure S1: Simulated reconstructed maximum temperature error versus number of slices, for conventional- and incoherent-controlled aliasing SMS. For each point, maximum error was calculated across the reconstructed slices and across the 50 k-space phase permutations.
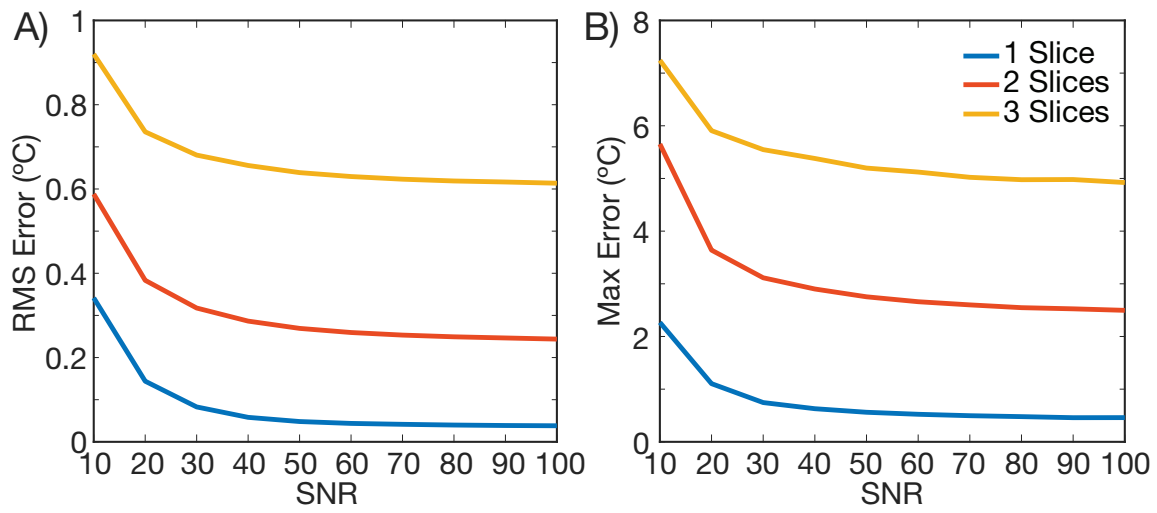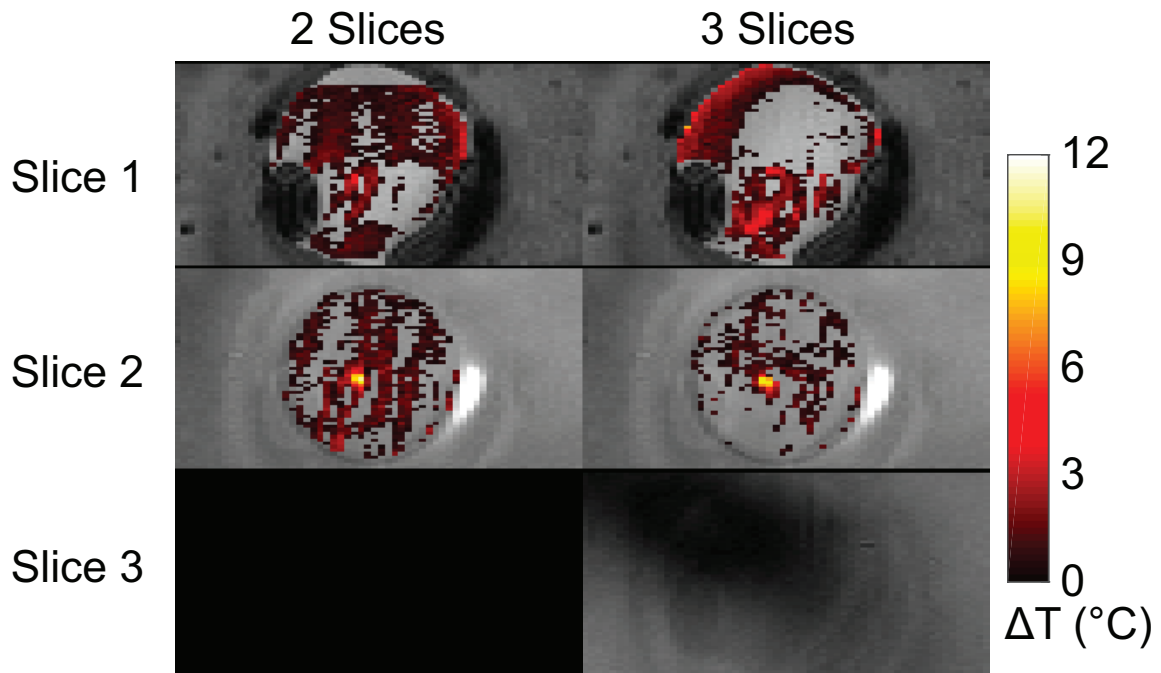
Supporting Information Figure S2: Simulated reconstructed RMS and maximum temperature error versus SNR, for one slice and for two and three simultaneous slices with incoherent-controlled aliasing. For each point, maximum error was calculated across the reconstructed slices and across the 50 k-space phase permutations.
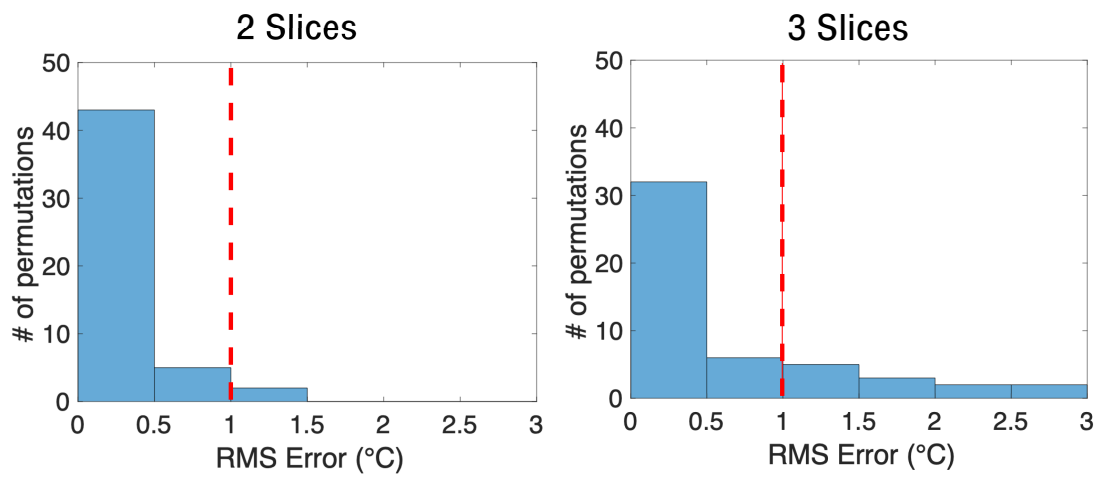
Supporting Information Figure S3: RMS errors of the 50 different random k-space slice-phase permutations used in the two- and three-slice simulations. The red line indicates the 1 °C acceptable error threshold.
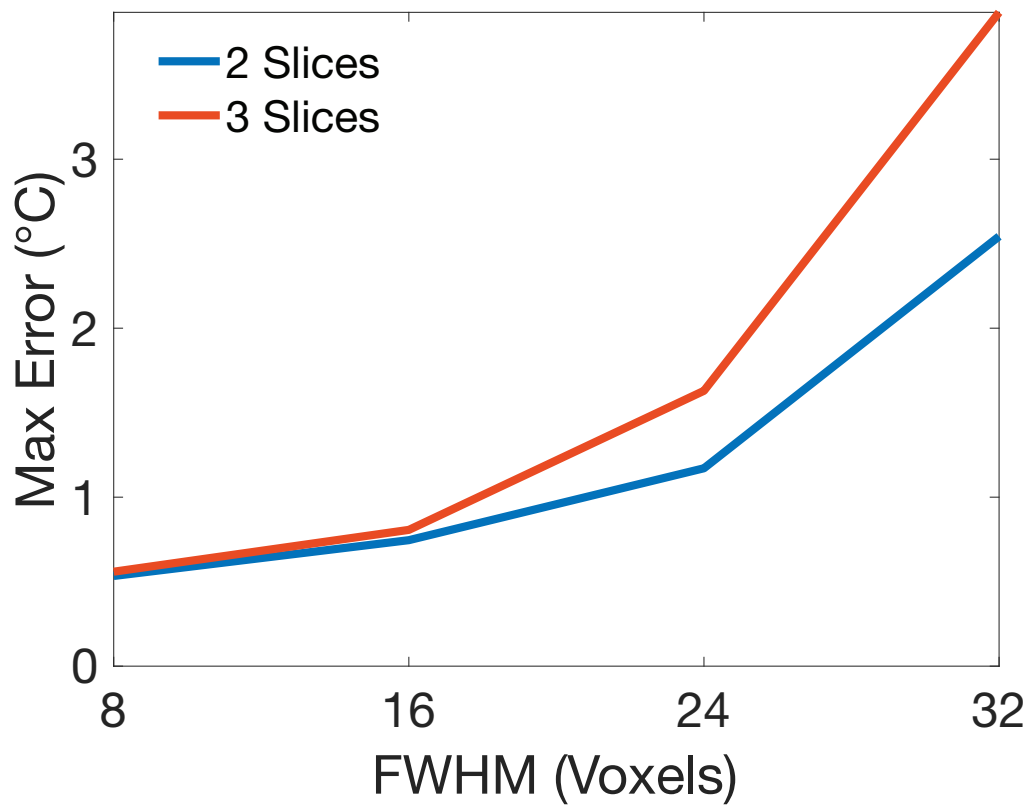
Supporting Information Figure S4: Simulated reconstructed maximum temperature error versus hot spot size, for 2 and 3 slices. For each point, maximum error was calculated across the reconstructed slices and across the 50 k-space phase permutations.

Supporting Information Figure S5: Axial phantom temperature maps in each slice at peak heat (30 seconds) for two- and three-slice SMS, when water bath signal changes are ignored in the reconstruction. Temperature rises above 0.1 °C are overlaid on baseline images that are cropped to the phantom.