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Generating Novel Spin Echoes Using the Internal Structure of Strong Pi-Pulses RONA RAMOS, YANQUN DONG, DALE LI, SEAN BARRETT, Yale University — Conventionally, strong pulses used to control coherent evolution are approximated as instantaneous, perfect rotations. However, recent experiments have shown a surprising departure from the conventional theory in standard multipulse NMR experiments using strong pi-pulses. Using our understanding of the role that the finite time duration of any real pulse plays in these effects, we design and experimentally demonstrate new classes of spin echoes.

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