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**Demostration of Double Electromagnetically Induced Transparency in a Hot Atomic Vapor**[1] ANDREW MACRAE, GEOFF CAMPBELL, ALEXANDER LVOVSKY, Institute for Quantum Information Science, University of Calgary — We report demonstration of double electromagnetically-induced transparency in a hot rubidium-87 vapor: two transparency windows appear simultaneously on $\|5S_{1/2}, F = 1\rangle \rightarrow \|5P_{1/2}, F = 2\rangle$ and $\|5S_{1/2}, F = 2\rangle \rightarrow \|5P_{1/2}, F = 2\rangle$ when a single control field is applied. We have been able to simultaneously slow down two optical pulses resonant with these transitions. By switching the control field, we have demonstrated simultaneous storage of these pulses.

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