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Towards atom interferometry with squeezed states BAOCHEN WU, GRAHAM P. GREVE, JAMES K. THOMPSON, JILA and Department of Physics, University of Colorado Boulder — We have previously demonstrated approximately 18 dB of spin squeezing in an ensemble of Rb 87 atoms using cavity-enhanced collective measurements (Cox et al, PRL 116, 093602). We will present our recent progress towards mapping spin squeezed states onto a squeezed matterwave interferometer.

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