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**Tailorable Dispersion in a Ring-Laser Cavity** DEMETRIOUS KUTZKE, EUGENIY MIKHAILOV, IRINA NOVIKOVA, College of William and Mary, OWEN WOLFE, Montana State University — We present progress toward achieving controllable dispersion in a ring-laser cavity with the goal of improving rotation sensitivity in ring-laser gyroscopes. Preliminary results show that we can tailor the intra-cavity dispersion's slope of our laser based on an N-level pumping scheme of 87Rb. We can tune the pulling factor (PF), i.e. the ratio of the laser frequency shift to the empty cavity frequency shift, of our laser by more than an order of magnitude by varying experimental parameters such as atomic density, pump power, and laser detunings.

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