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Blue Satellite Bands and Photoassociation near $7P_{3/2}$ and $7P_{1/2}$ Atomic Limits in Cesium MARIN PICHLER¹, Physics Department, Goucher College, Baltimore MD, JIANBING QI, Penn State University, Berks Reading, PA 19610, WILLIAM C. STWALLEY, Department of Physics, University of Connecticut, Storrs CT, ROBERT BEUC, Institute of Physics, Zagreb, Croatia, GORAN PICHLER, Institute of Physics, Zagreb, Croatia — We present observation of atomic self-broadening at ultracold temperatures in cesium near $7P_{3/2}$ and $7P_{1/2}$ atomic limits using a MOT and resonant ionization detection. Blue satellite band features were observed at detunings of 560 MHz and 800 MHz. In addition, sharp hyperfine-split photoassociative spectra were observed on the red and blue wings of each line. Given the local maxima in the long range molecular structure (beyond 50 Å), possible explanations of these features are discussed.

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