Abstract Submitted
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Design and construction of tapered amplifier systems for the advanced undergraduate laboratory[1] JAYAMPATHI KANGARA, ANDREW HACHTEL, JASON BARKELOO, JEFFREY KLEYKAMP, MATTHEW GILLETTE, SAMIR BALI, Department of Physics, Miami University — We report on the design and construction of tapered amplifier (TA) systems in a primarily undergraduate setting, each system costing less than $4000 to build. Plots of power output are presented versus seed power and TA current, including plots of TA output coupled through a single-mode optical fiber. We acknowledge invaluable discussions with Prof. D. Yavuz's group at Univ. of Wisconsin, Madison on the optics for collimation of the seed laser into the TA chip, and of the TA output. Also, we have based our current and temperature drivers for the TA system on circuit designs by Prof. D. Steck's group at the Univ. of Oregon, Eugene.

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