Title:	Application of single-slit diffraction to measure Youngs modulus
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Abstract:	We demonstrate an application of the laser diffraction by a single-slit to measure the Young's modulus of the material of a wire. The standard Searle's apparatus is modified to exploit the sensitivity of the diffraction pattern for changes in slit widths of the order of laser wavelengths produced by micro elongations in the wire when a stress is applied to it. The experiment is performed using different lasers as well as for wires of different materials and produces results with an error of few percent.
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