

PHYSICS SEMINAR

Optical Feedback in a Diode Laser

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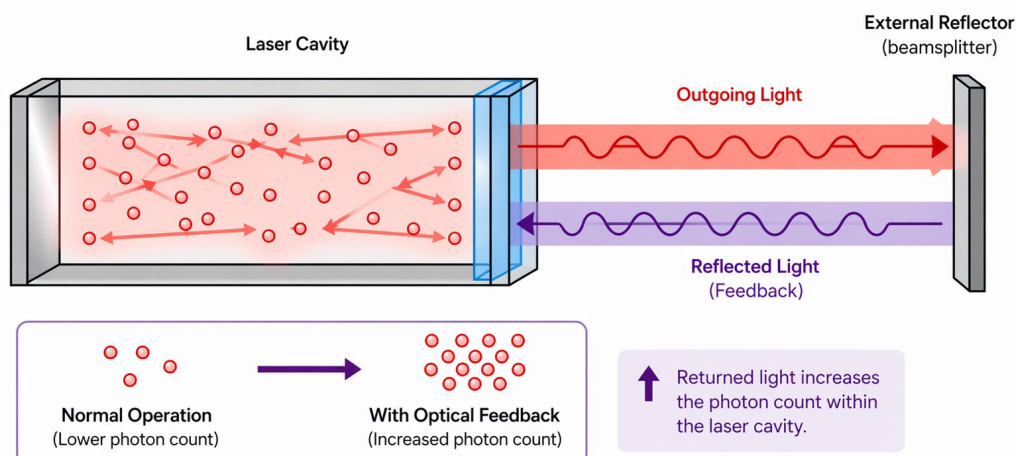
Thursday, April 30, 2026

12:30 – 1:30 p.m.

Wubben 160

We demonstrate and discuss the techniques of measuring the optical feedback of a diode laser as a first step in measuring the speed of light without long path lengths or fast detectors. Optical feedback is the fraction of the light reentering the laser cavity, due to an external reflecting surface, and disturbing the average laser power output. This disturbance lowers the threshold current of the laser, which is the current at which the laser starts operating. We built an adjustable current driver to measure the laser threshold current with and without optical feedback, then measured the optical feedback strength. Initial work has begun on creating a pulsed drive for the laser.

Optical Feedback



Refreshments!