

Abstract Submitted
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Simple Digital Feed-Forward Circuit to Compensate for AOM Thermal Lensing JOSHUA HILL, JAMES AMAN, THOMAS KILLIAN, Rice Univ, NEUTRAL EXPERIMENT TEAM — I demonstrate a simple digital feed-forward circuit which, when combined with two-frequency radio frequency (RF) electronics, maintains constant total RF power driving an acousto-optic modulator (AOM). Consistency in total power is desirable to mitigate thermal lensing effects that otherwise displace and misshape the laser beam when the primary frequency drive RF power is changed to, for example, alter the laser power in a diffracted beam. The Arduino-based feed-forward circuit is cost-effective, quick to implement, and easily modified.

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