RAYLEIGH SCATTERING CROSS SECTION MEASUREMENTS WITH A THREE MIRROR RING CAVITY

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Most optical cavities in cavity ring-down spectroscopy consist of two mirrors. Using a more complicated cavity design, such as one with three mirrors, can lead to advantages such as reducing the effect of baseline variations due to reflections between the cavity mirror and the laser. A three mirror cavity in the ring configuration has been developed which uses the backward traveling wave to provide feedback to an external cavity diode laser. Measurements of Rayleigh scattering cross sections using this setup will be discussed.