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Confocal microscopy of fluids under static pressure MATTHEW MCCLUSKEY, Washington State University — There are few reliable methods for obtaining equations of state for fluids under static pressure. We are developing *confocal microscopy* to investigate fluids in a diamond-anvil cell. Unlike conventional optical microscopy, confocal microscopes collect data point-by-point, enabling three-dimensional image reconstruction. By combining these images with Fabry-Perot interference measurements, we determine the volume and refractive index, as a function of pressure, in the same experiment.

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