Confocal microscopy of water under static pressure MATTHEW MCCLUSKEY, BOBBIE RILEY, MICHAEL KNOBLAUCH, Washington State University — Developments in confocal microscopy have revolutionized the imaging of samples. Unlike conventional microscopes, which illuminate a wide area, confocal microscopes focus light onto a single spot on the sample. The sample is scanned, data are collected point by point, and an image is reconstructed from the data. Samples can be scanned in three dimensions, allowing one to obtain 3D image reconstructions. We have used confocal microscopy to obtain high-quality images of water freezing in a moissanite anvil cell. This technique could prove useful for a variety of equation-of-state investigations.